THOMSON MULTIMEDIA

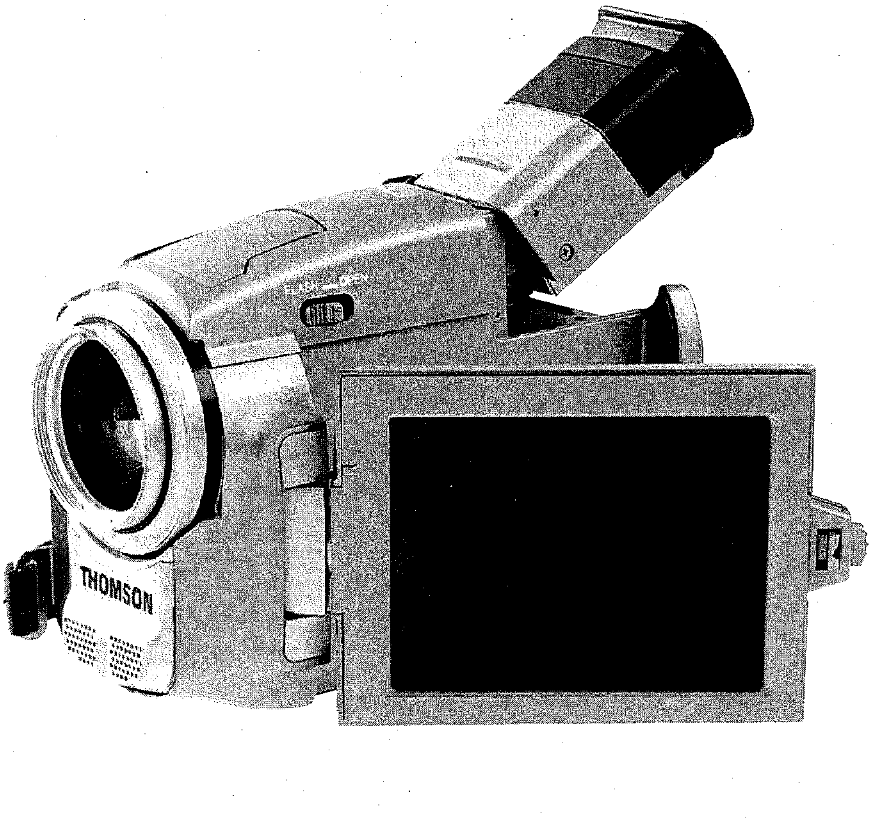
Brandt FERGUSON SABA TELEFUNKEN THOMSON

VIDEO

SERVICE MANUAL
DOCUMENTATION TECHNIQUE
TECHNISCHE DOKUMENTATION
DOCUMENTAZIONE TECNICA
DOCUMENTACION TECNICA

VMD10/20

CAMESCOPES



VMD10/20 ◁ THOMSON

WARNING : *Before servicing this chassis read the safety recommendations.*
ATTENTION : *Avant toute intervention sur ce châssis, lire les recommandations de sécurité.*
ACHTUNG : *Vor jedem Eingriff auf diesem Chassis, die Sicherheitsvorschriften lesen.*
ATTENZIONE : *Prima di intervenire sullo chassis, leggere le norme di sicurezza.*
IMPORTANTE : *Antes de cualquier intervención, leer las recomendaciones de seguridad.*

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SPECIFICATIONS

GENERALS

FORMAT : DV Format (SD mode)

STANDARD : PAL

POWER SOURCE : DC 6,3V (Using the AC Power Adapter/Charger)
DC 7,2V (Using battery pack)

CONSUMPTION : 4,5 W (LCD monitor off - viewfinder on)
5,3 W (LCD monitor on - viewfinder off)

DIMENSIONS : 77 (W) x 142 (H) x 94 (D) mm (With the LCD monitor closed and the viewfinder pushed back in)

WEIGHT : approx. =620 g

ACCESSORIES : AC power adapter - Lithium battery - Hand strap - Power cord - Remote control unit - Remote control battery - Cinch/Peritel adapter - S-VIDEO cable - JLIP cable - PC cable - IEEE1394 cable - AV cable -

CAMERA SECTION

SENSOR : CCD 1/3"

PIXELS : 800 000

SENSITIVITY : < 1 Lux

ZOOM : 10x - 200x Digital Zoom

LENS : F /1,8 f = 5 to 50 mm 10:1 power zoom lens.

FILTER DIAMETER : filter diameter 37 mm.

WHITE BALANCE : auto

VIEWFINDER : 0,55 " colour LCD

VIDEO RECORDING SECTION

HEAD CONFIGURATION : 2 video head

S-VIDEO OUTPUT : Y: 1 Vp-p /75 Ω analogue
C: 0,29 Vp-p / 75 Ω analogue

S-VIDEO INPUT : Y: 0,8 Vp-p - 1,2 Vp-p / 75 Ω analogue
C: 0,2 Vp-p - 0,4 Vp-p / 75 Ω analogue

VIDEO OUTPUT/INPUT-VMD20 : 1 Vp-p / 75 Ω analogue - 0,5 Vp-p - 2,0 Vp-p / 75 Ω analogue

AUDIO OUTPUT/INPUT-VMD20 : 300 mV (rms) / 1 kΩ - 300 mV (rms) / 50 kΩ analogue stereo

VIDEO OUTPUT-VMD10 : 1 Vp-p / 75 Ω analogue

AUDIO OUTPUT-VMD10 : 300 mV (rms) / 1 kΩ analogue stereo

HEADPHONE OUTPUT : jack Ø 3,5 mm

DV OUTPUT/INPUT-VMD20 : 4-pin, IEEE 1394 compliant

DV OUTPUT-VMD10 : 4-pin, IEEE 1394 compliant

DIGITAL STILL OUTPUT : Ø 2,5 mm, 3 pole

JLIP EDITOR : Ø 3,5 mm, 4 pole

TAPE SPEED : 18,8 mm/s (SP) - 12,5 mm/s (LP)

MAXIMUM RECORDING TIME : 80 min (SP) - 120 min (LP) using M-DV80 cassette

MAINS SUPPLY/ CHARGER

POWER SOURCE : AC 110 to 240 V ~ , 50/60 Hz

POWER CONSUMPTION : 23 W

OUTPUT : DC 7,2 V -1,2 A (charge) ; DC 6,3 V - 1,8 A (VTR)

SYSTEM : constant current, peak detection, timer controlled.

DIMENSIONS : 68 (W) x 38 (H) x 110 (D) mm

WEIGHT : approx. 250 g

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SECTION 1
DISASSEMBLY

1.1 BEFORE ASSEMBLY AND DISASSEMBLY

1.1.1 Precautions

1. Be sure to remove the power supply unit prior to mounting and soldering of parts.
2. When removing a component part that needs to disconnect the connector and to remove the screw for removing itself, first disconnect the connecting wire from the connector and then remove the screw beforehand.
3. When connecting and disconnecting the connectors, be careful not to damage the wire.
4. When replacing chip parts (especially IC parts), desolder completely first (to prevent peeling of the pattern).
5. Tighten screws properly during the procedures. Unless specified otherwise, tighten screws at a torque of 0.1N·m (1.0kgf·cm).

1.1.2 Assembly and disassembly

STEP /LOC NO.	PART	Fig. No.	REMOVAL	
			UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER	Note
①	UPPER CASE	Fig.1-3-1	(S1a), (S2b), (S1c), (S1d) (S1e), (L1a), 2(L1b), (L1c) CONNECTOR Ⓐ	Note 1b Note 1c
②	FRONT COVER ASSY		(S1b), 2(S1e) CONNECTOR Ⓑ ; Ⓒ GRIP BELT	Note 1a Note 1b

↑ ↑ ↑ ↑ ↑
(1) (2) (3) (4) (5)

(1) Indicate the disassembly steps. When assembling, perform in the reverse order of these steps. This number corresponds to the number in the disassembly diagram.

(2) Indicates the name of disassembly/assembly parts.

(3) Indicates the number in the disassembly diagram.

(4) Indicates parts and points such as screws, washers, springs which must be removed during disassembly/assembly.
P = Spring
W = Washer
S = Screw
Lock (L), soldering (SD), shield, connector, etc.

[Example] • Remove (W1) = Washer W1.
• Remove (SD1) = Soldering at the point SD1.
• Connector Ⓐ = Disconnector the connector Ⓐ.

(5) Precautions on disassembly/assembly.

1.1.3 Disconnection of Connectors (Wires)

Connector
Pull both ends of the connector in the arrow direction, remove the lock and disconnect the flat wire.

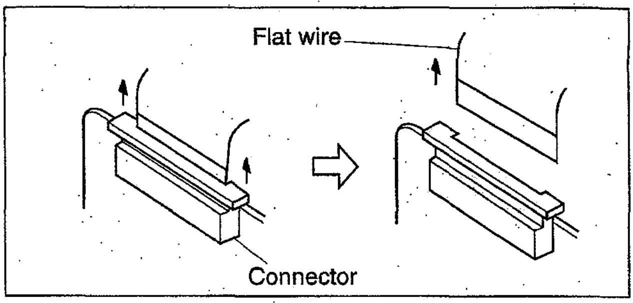


Fig. 1-1-1 Connector 1

Extend the locks in the direction of the arrow for unlocking and then pull out the wire. After removing the wire, immediately restore the locks to their original positions because the locks are apt to come off the connector.

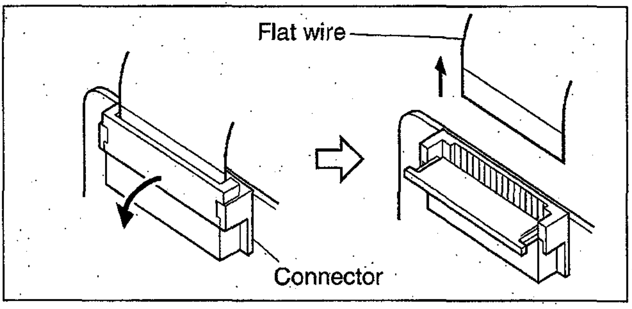


Fig. 1-1-2 Connector 2

B-B connector
Pull the board by both the sides in the direction of the arrow for disconnecting the B-B connector

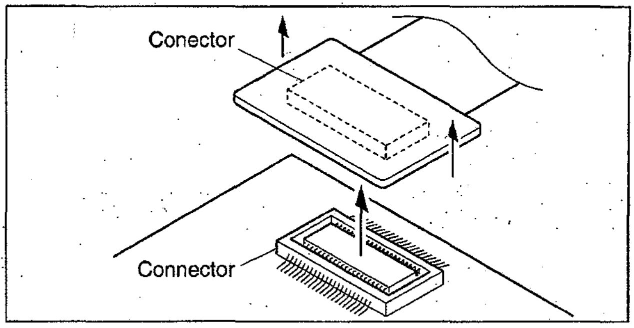


Fig. 1-1-3 Connector 3

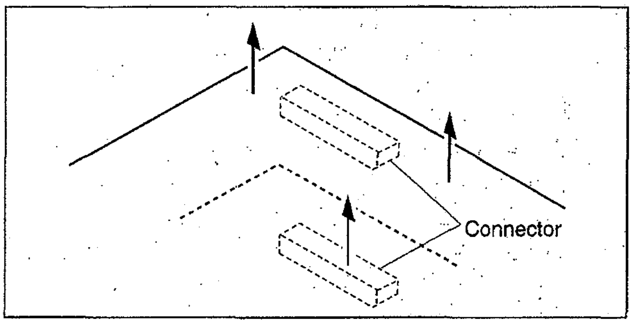


Fig. 1-1-4 Connector 4

1.2 TOOLS AND EQUIPMENTS REQUIRED FOR ADJUSTMENTS

1.2.1 Tools required for adjustments

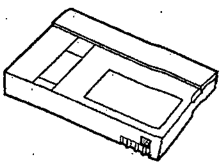
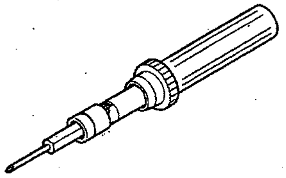
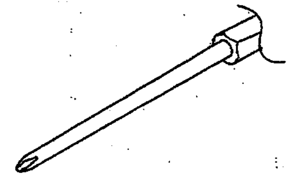
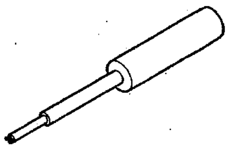
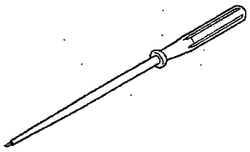
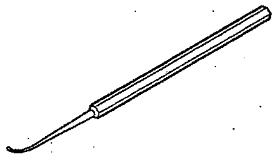
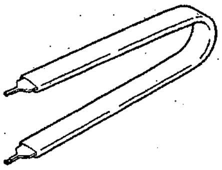
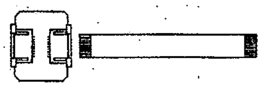
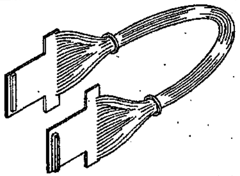
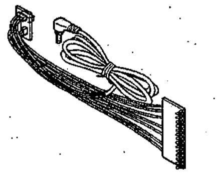
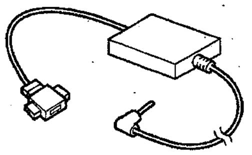
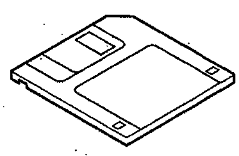
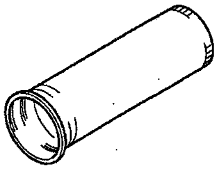
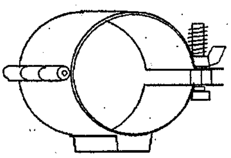
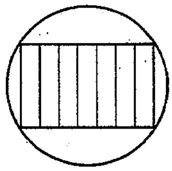
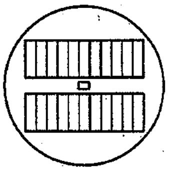
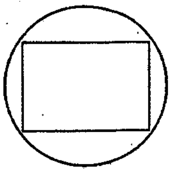
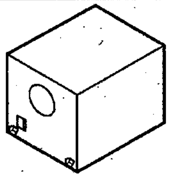
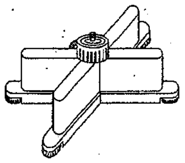
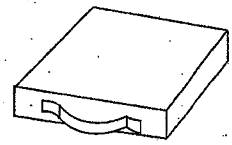
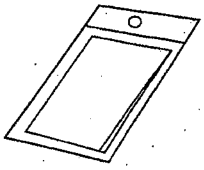
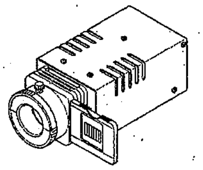
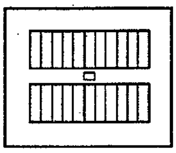
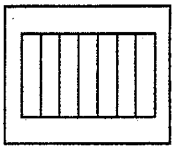
1 Alignment tape MC-2 35084420	2 Torque driver 35027200	3 Bit 35081460	4 Guide driver 35084430
			
5 Adjustment driver 10361290	6 Chip IC replacement jig 10361310	7 Connector catcher 70402598	8 Patch cord 35118080
			
9 Patch cord 35118090	10 Jig connector cable 35118100	11 PC cable 35065010	12 Service support system 35118110
			
13 INF adjustment lens 10145030	14 INF adjustment lens holder 35039040	15 Color bar chart 10211950	16 Gray scale chart 10211970
			
17 White balance chart 10211980	18 Light box 10262860	19 Camera stand	20 Soldering kit
			
21 Cleaning cloth	22 Light box assembly 35118050	23 Gray scale chart 35118060	24 Color bar chart 35118070
			

Table 1-2-1

1. Alignment tape
   To be used for check and adjustment of interchangeability of the mechanism.
2. Torque driver
   Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.
3. Bit
   This bit is slightly longer than those set in conventional torque drivers.
4. Guide driver
   To be used to turn the guide roller to adjustment of the linarity of playback envelope.

5. Adjustment driver
To be used for adjustment.

6. Chip IC replacement jig
To be used for adjustment of the camera system.

7. Connector catcher
To be used to release the connector.

8/9. Patch cord
To be used to connect electrical parts, P.C. boards, etc. for servicing.

10. JIG connector cable
Connected to CN303 of the reg board and used for measuring error rates, etc.

11. PC cable
To be used to connect the VideoMovie and a personal computer with each other when a personal computer is used for adjustment.

12. Service support software
To be used for adjustment with a personal computer.

13. INF adjustment lens
To be used for adjustment of the camera system.

14. INF lens holder
To be used together with the camera stand (19) for operating the VideoMovie in the stripped-down condition such as the status without the exterior parts or for using commodities that are not yet conformable to the interchangeable ring.

15. Color bar chart (for No. 13)
To be used for adjustment of the camera system.

16. Gray scale chart (for No. 13)
To be used for adjustment of the camera system.

17. White balance chart (for No. 13)
To be used for adjustment of the camera system.
(for white balance adjustment)

18. Light box
To be used for adjustment of the camera system.

19. Camera stand
To be used together with the INF adjustment lens holder.

20. Soldering kit
Thin head is made so that it can be inserted into small spaces.

21. Cleaning cloth
Recommended cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

22. Light box (new type)
To be used for adjustment of the camera system.

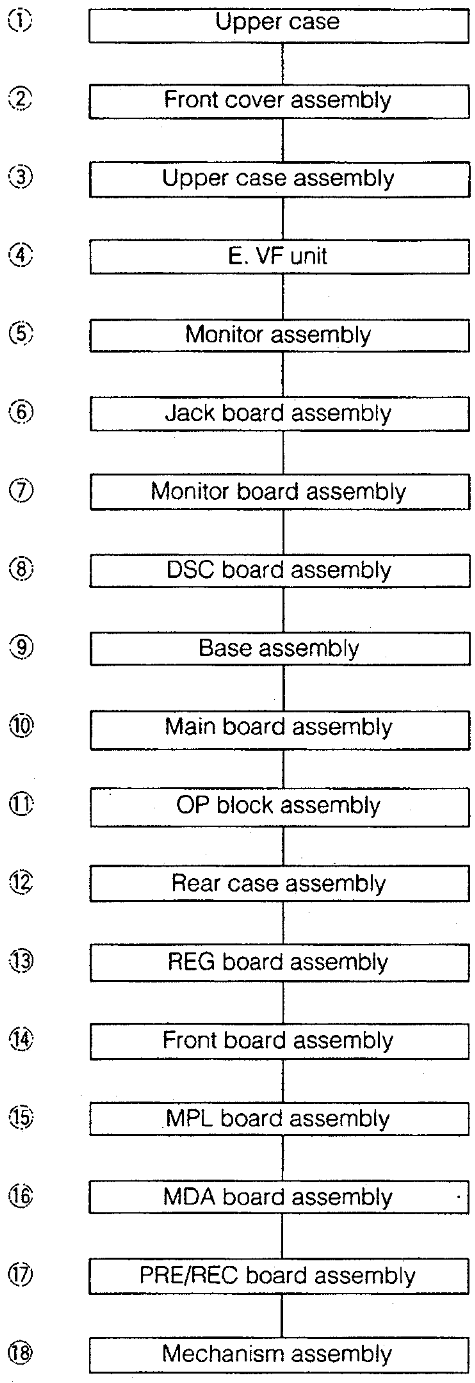
23. Gray scale chart (for No. 22)
To be used for adjustment of the camera system.

24. Color bar chart (for No. 22)
To be used for adjustment of the camera system.

1.3 DISASSEMBLY/ASSEMBLY OF CABINET PARTS

1.3.1 Disassembly flow chart

This flowchart indicates the disassembly step for the cabinet parts and board assembly in order to gain access to item(s) to be serviced. When reassembling, perform the step(s) in reverse order. Bend, route and dress the flat cables as they were originally.


① Upper case
② Front cover assembly
③ Upper case assembly
④ E. VF unit
⑤ Monitor assembly
⑥ Jack board assembly
⑦ Monitor board assembly
⑧ DSC board assembly
⑨ Base assembly
⑩ Main board assembly
⑪ OP block assembly
⑫ Rear case assembly
⑬ REG board assembly
⑭ Front board assembly
⑮ MPL board assembly
⑯ MDA board assembly
⑰ PRE/REC board assembly
⑱ Mechanism assembly

1.3.2 Disassembly method

STEP /LOC NO.	PART	Fig. No..	REMOVAL	
			UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER	Note
①	UPPER CASE	Fig.1-3-1	(S1a), (S2b), (S1c), (S1d) (S1e), (L1a), 2(L1b), (L1c) CONNECTOR Ⓐ	Note 1b Note 1c
②	FRONT COVER ASSY		(S1b), 2(S1e) CONNECTOR Ⓑ, Ⓒ GRIP BELT	Note 1a Note 1b
③/④/⑤	UPPER CASE ASSY (INCL. E. VF UNIT, MONITOR ASSY)	Fig.1-3-2	3(S2a), (S2b), (S2c), 2(S2d) CONNECTOR Ⓓ, Ⓔ MULTI MEDIA CARD	Note 2
④	E. VF UNIT	Fig.1-3-3	2(S3) CONNECTOR Ⓕ LUG WIRE	Note 3a Note 3b
⑤	MONITOR ASSY	Fig.1-3-4	2(S4), (L4) CONNECTOR Ⓖ SPACER	–
⑥	JACK BOARD ASSY	Fig. 1-3-5	(S5a), (S5b), (L5) BRACKET (JACK)	–
⑦	MONITOR BOARD ASSY		3(S5b) CONNECTOR Ⓗ SPACER, SPEAKER	Note 5a Note 5b Note 5c
⑧	DSC BOARD ASSY	Fig. 1-3-6	3(S6), (L6) CONNECTOR Ⓙ, Ⓚ, Ⓛ LUG WIRE	Note 6
⑨	BASE ASSY	Fig.1-3-7	(S7a), (S7b)	–
⑩	MAIN BOARD ASSY	Fig.1-3-8	CONNECTOR Ⓜ, Ⓝ, Ⓞ Ⓟ, Ⓠ, Ⓡ SPACER	–
⑪	OP BLOCK ASSY	Fig.1-3-9	(S9a), (S9b), (S9c) CONNECTOR Ⓢ LUG WIRE	Note 9
⑫/⑬/⑭	REAR CASE ASSY (INCL. REG BOARD ASSY)	Fig.1-3-10	(S10a), 2(S10b), (S10c) CONNECTOR Ⓣ SPEACER	–
⑬	REG BOARD ASSY	Fig.1-3-11	5(S11), CONNECTOR Ⓤ	–
⑭	FRONT BOARD ASSY	Fig.1-3-12	(S12a), (S12b), (S12c), 2(S12d) CONNECTOR Ⓥ JACK COVER	Note 12
⑮	MPL BOARD ASSY		(S12c)	Note 12b
⑯/⑰/⑱	MDA ASSY (PRE/REC BOARD ASSY INCL. MECHANISM ASSY)	Fig.1-3-13a	3(S13a), 2(L13)	Note 13a Note 13b
⑯	MDA BOARD ASSY	Fig. 1-3-13b	2(S13b) CONNECTOR Ⓦ, Ⓧ, Ⓨ	–
		Fiig. 1-3-13c	CONNECTOR Ⓩ	Note 13c
⑰	PRE/REC BOARD ASSY	Fig. 1-3-14	2(S14), CONNECTOR ⓐ SHIELD COVER (PR)	–
⑱	MECHANISM ASSY	Fig. 1-3-15	2(S15), 2(L15) BRACKET (MECHA)	–

<Note>

Note 1a : *When dismantling the front cover assembly, remove the center screw (inside) only.*

Note 1b : *When removing the cover assembly, be sure to do it while sliding the front cover assembly frontwards because the lid is stuck into the inside.*
When assembling, install the ① first and then install the ② without fail.

Note 1c : *Be careful not to break the FPC wire.*

Note 2 : *On proceeding to this work, be sure to remove the Multi media card from the set beforehand.*

Note 3a : *Be careful not to break the FPC wire.*

Note 3b : *When assembling the E. VF unit to the main frame, tighten the lug wire together with the screw.*

Note 5a : *Pay heed to the connecting point of the GND wire.*

Note 5b : *Solder the wire to the GND side of C7209 on the MONITOR board assembly.*

Note 5c : *Pay careful attention to the spacer not to lose it.*

Note 6 : *When assembling the AUDIO board assembly into the main frame, tighten the lug wire together with the screw.*

Note 9 : *Since the lug wire of the CCD board assembly is tightened together with the screw that fastens the MPL board assembly, it is required to remove the screw No. 30.*

Note 12 : *Be careful not to damage the EJECT switch.*
Be sure to hold the cassette cover assembly closed throughout this work.

Note 13a : *When removing the board assembly, be careful not to damage any part.*

Note 13b : *When disassembling pay careful attention to the part not to break it.*

Note 13c : *When assembling the board assembly into the main frame, arrange the FPC with meticulous care.*

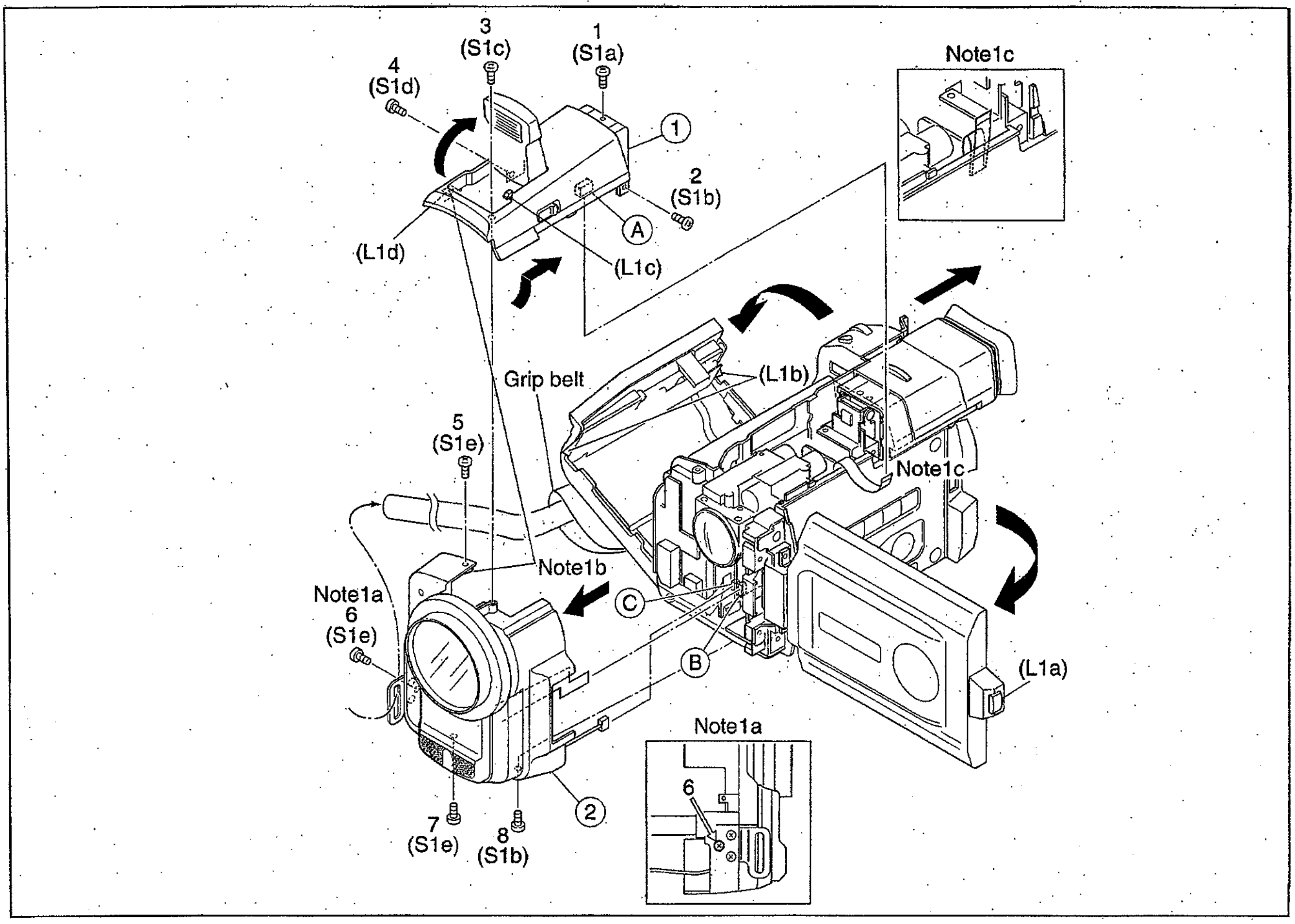
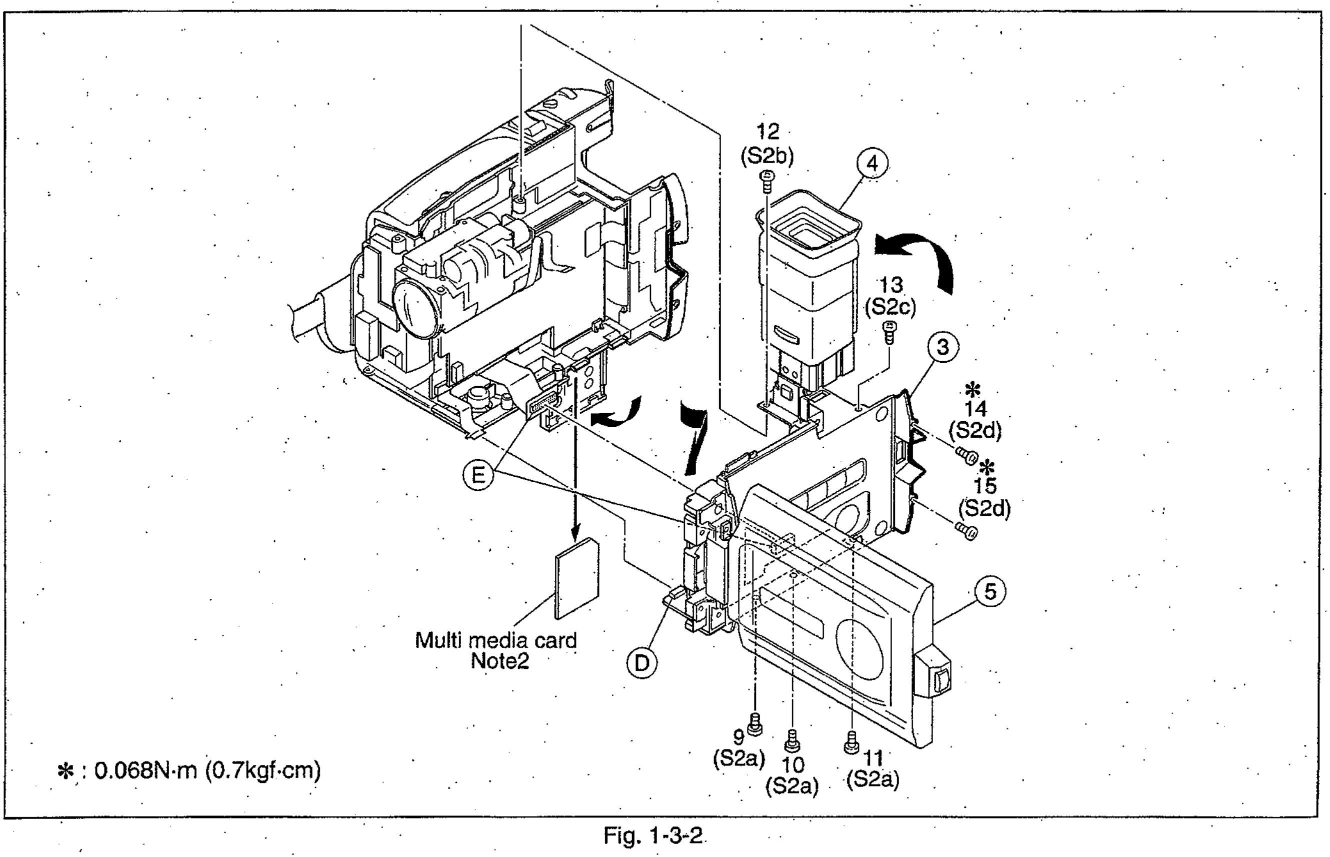

3
(S1c)
1
(S1a)
4
(S1d)
Note1c
①
2
(S1b)
Ⓐ
(L1d)
(L1c)
Grip belt
(L1b)
5
(S1e)
Note1c
Note1b
Note1a
6
(S1e)
Ⓒ
Ⓑ
(L1a)
Note1a
6
7
(S1e)
8
(S1b)
②

Fig.1-3-1


12
(S2b)
④
13
(S2c)
③
*
14
(S2d)
*
15
(S2d)
Ⓔ
Multi media card
Note2
⑤
Ⓓ
9
(S2a)
10
(S2a)
11
(S2a)

*: 0.068N·m (0.7kgf·cm)

Fig. 1-3-2

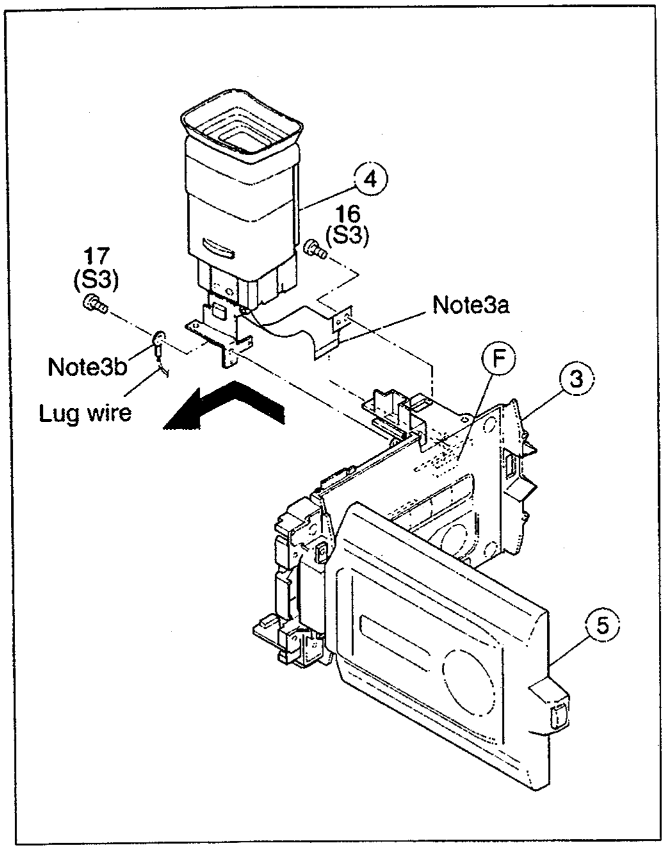

④
16
(S3)
17
(S3)
Note3a
Note3b
Lug wire
Ⓕ
③
⑤

Fig. 1-3-3

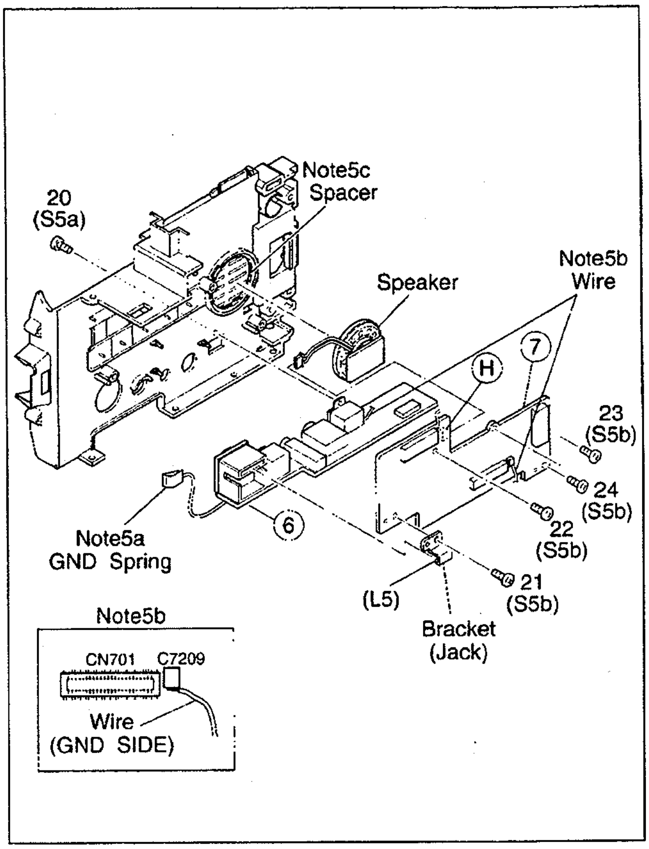
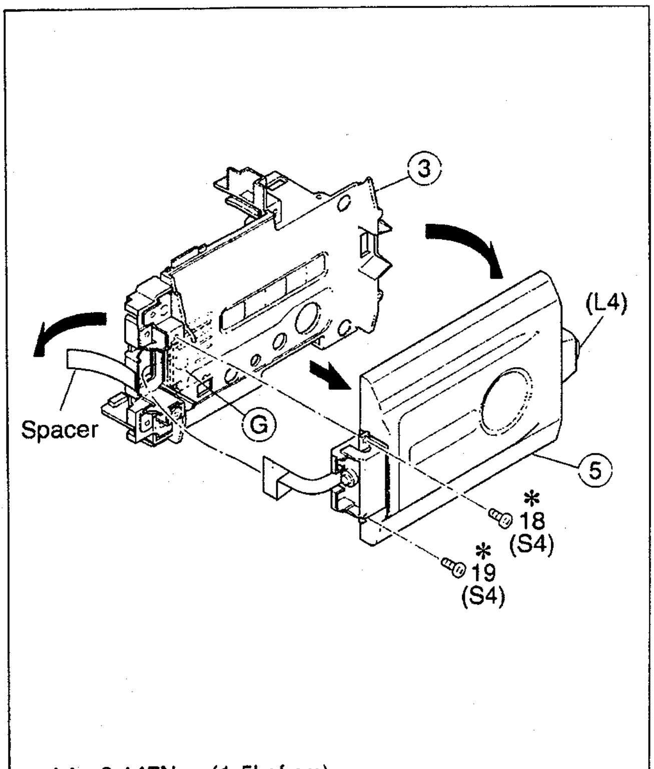

20
(S5a)
Note5c
Spacer
Speaker
Note5b
Wire
⑦
Ⓗ
23
(S5b)
24
(S5b)
22
(S5b)
21
(S5b)
⑥
Note5a
GND Spring
(L5)
Bracket
(Jack)
Note5b
CN701
C7209
Wire
(GND SIDE)

Fig. 1-3-5


③
(L4)
Spacer
Ⓖ
⑤
*
18
(S4)
*
19
(S4)

**: 0.147N·m (1.5kgf·cm)

Fig. 1-3-4

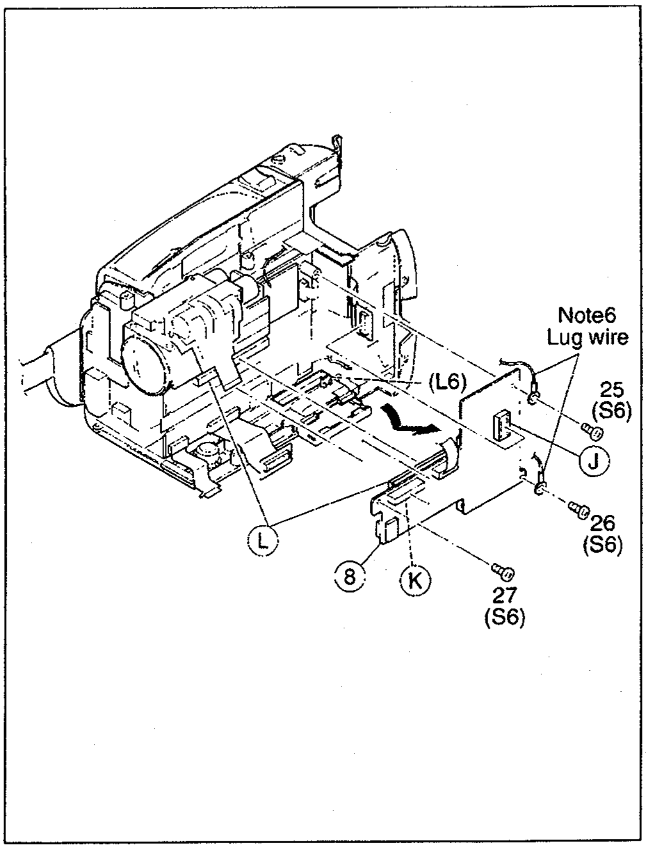
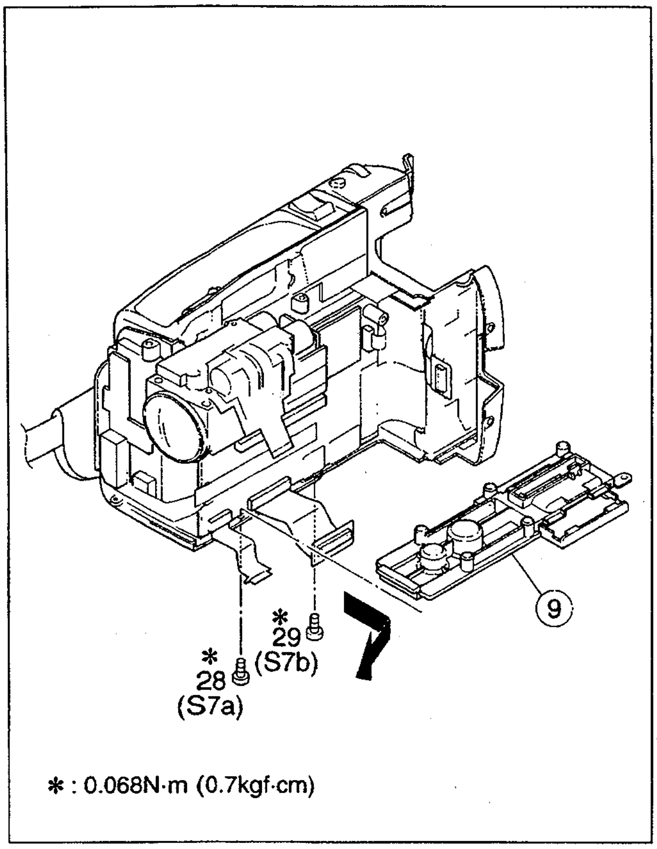
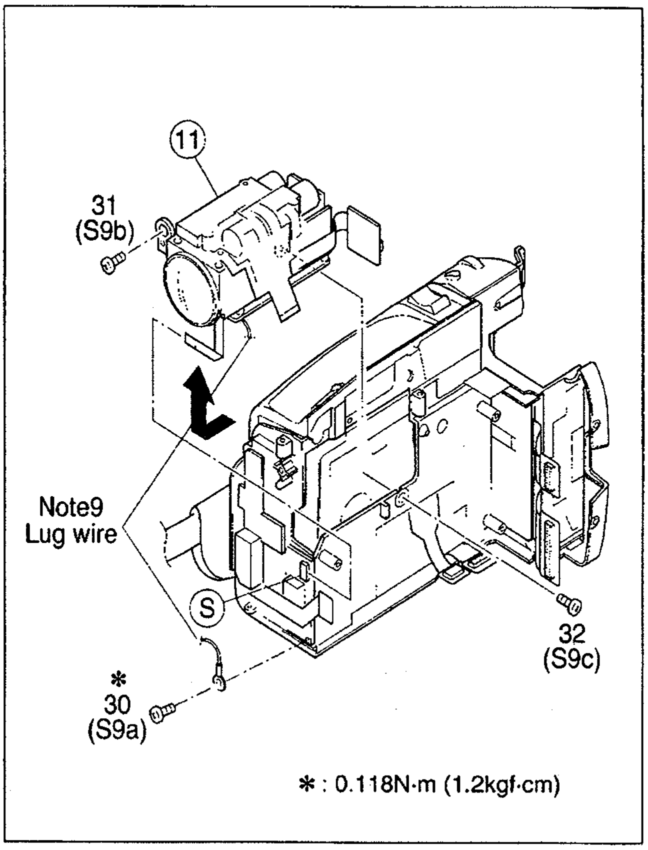

Note6
Lug wire
(L6)
25
(S6)
Ⓙ
26
(S6)
Ⓛ
⑧
Ⓚ
27
(S6)

Fig. 1-3-6


9
29
(S7b)
28
(S7a)

∗ : 0.068N·m (0.7kgf·cm)

Fig. 1-3-7


11
31
(S9b)
Note9
Lug wire
S
30
(S9a)
32
(S9c)

∗ : 0.118N·m (1.2kgf·cm)

Fig. 1-3-9

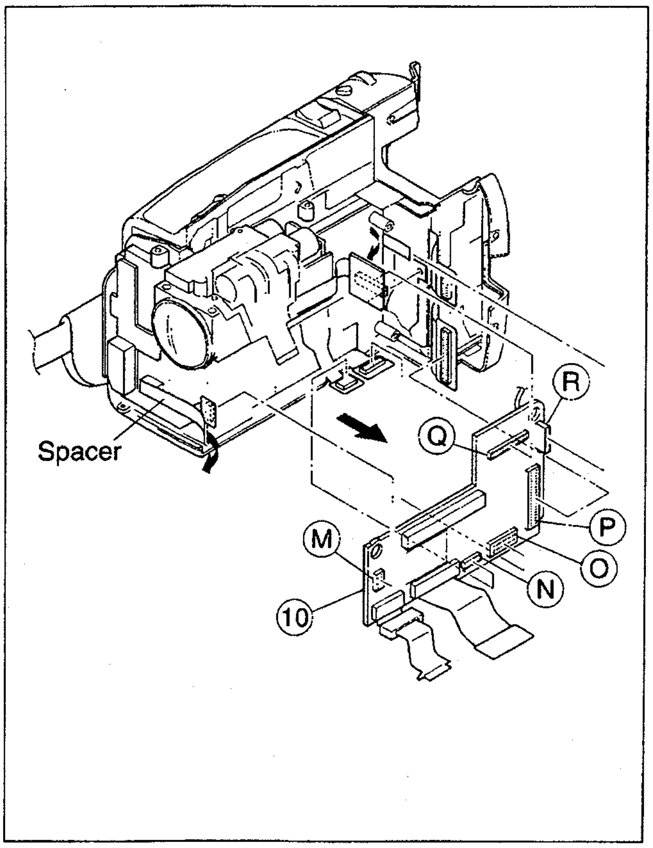
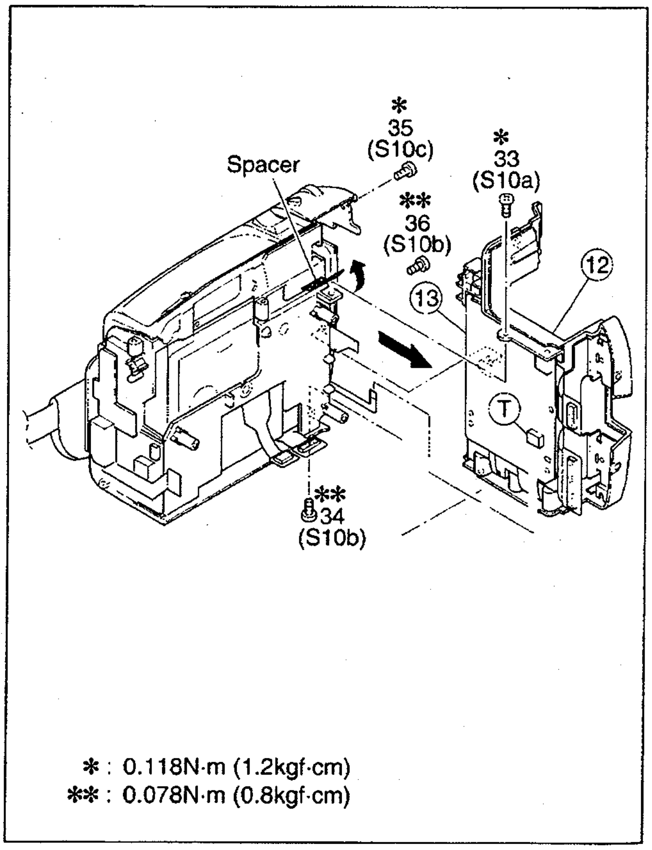
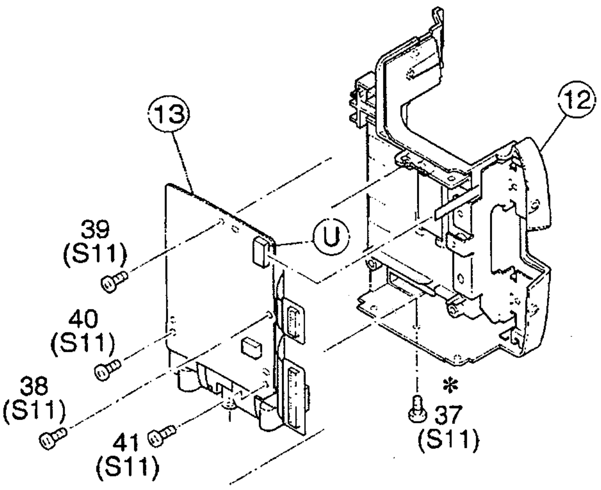

Spacer
R
Q
P
O
N
M
10

Fig. 1-3-8


∗
35
(S10c)
Spacer
∗
33
(S10a)
∗∗
36
(S10b)
12
13
T
∗∗
34
(S10b)

∗ : 0.118N·m (1.2kgf·cm)
∗∗ : 0.078N·m (0.8kgf·cm)

Fig. 1-3-10


13
12
U
39
(S11)
40
(S11)
38
(S11)
41
(S11)
*
37
(S11)

* : 0.078N·m (0.8kgf·cm)

Fig. 1-3-11

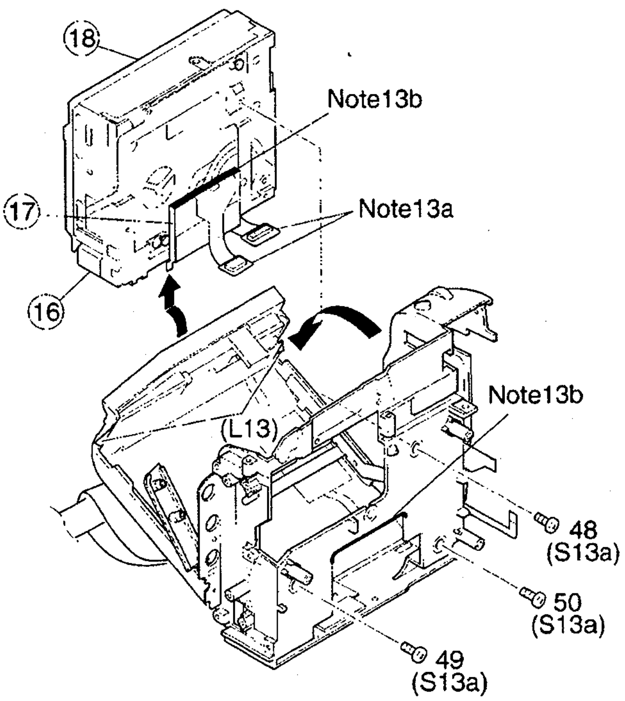
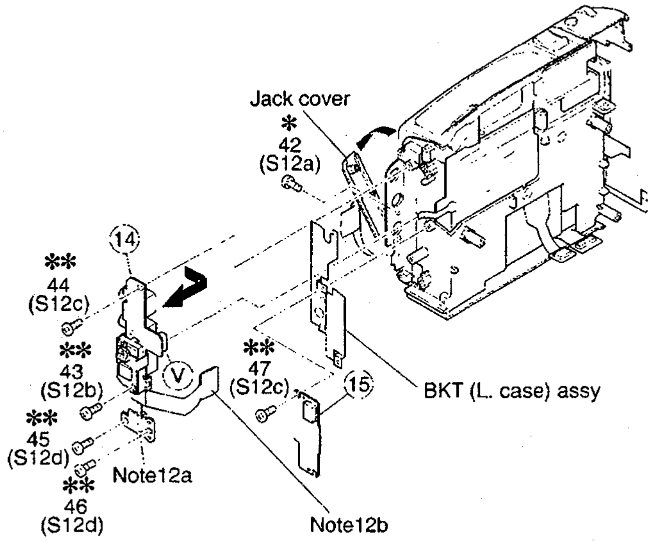

18
Note13b
17
Note13a
16
Note13b
(L13)
48
(S13a)
50
(S13a)
49
(S13a)

Fig. 1-3-13a


Jack cover
*
42
(S12a)
14
**
44
(S12c)
**
43
(S12b)
V
**
47
(S12c)
15
BKT (L. case) assy
**
45
(S12d)
**
46
(S12d)
Note12a
Note12b

* : 0.078N·m (0.8kgf·cm)
** : 0.118N·m (1.2kgf·cm)

Fig. 1-3-12

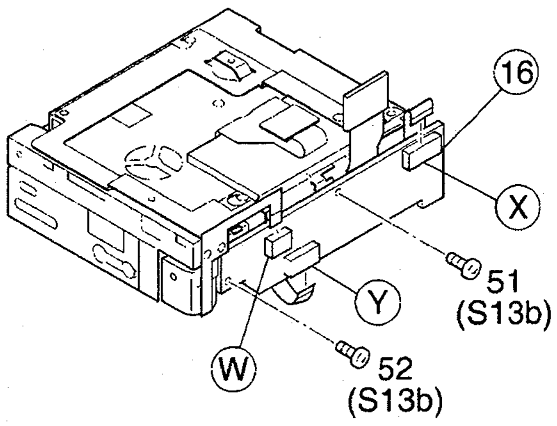

16
X
51
(S13b)
Y
W
52
(S13b)

Fig. 1-3-13b

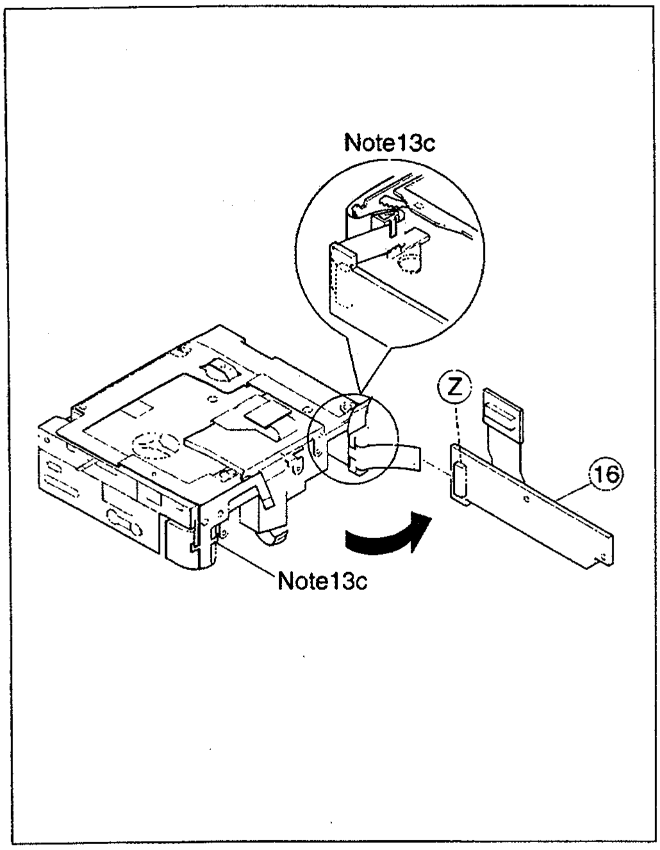
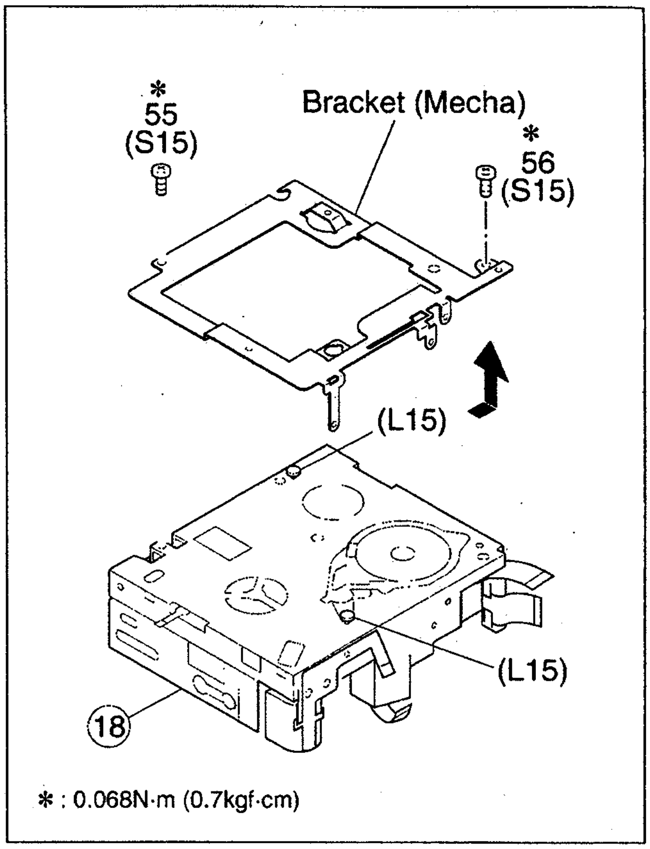
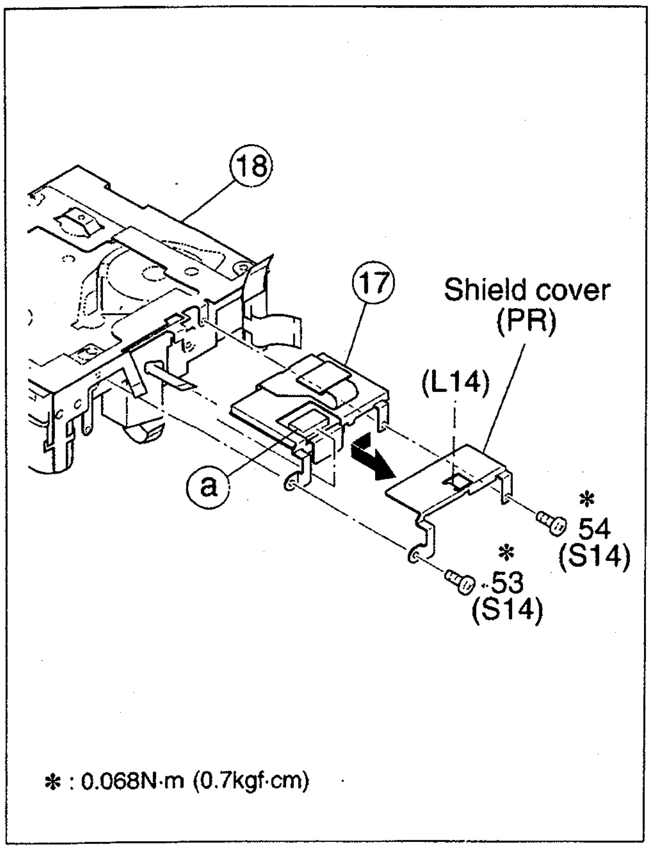

Note13c
Z
16
Note13c

Fig. 1-3-13c


*
55
(S15)
Bracket (Mecha)
*
56
(S15)
(L15)
(L15)
18

* : 0.068N·m (0.7kgf·cm)

Fig. 1-3-15


18
17
Shield cover (PR)
(L14)
a
*
54
(S14)
*
53
(S14)

* : 0.068N·m (0.7kgf·cm)

Fig. 1-3-14

1.4 DISASSEMBLY/ASSEMBLY OF E. VF UNIT

1.4.1 E. VF unit

1. Remove the eyecup and then draw out the viewfinder (VF).
2. Remove the four screws (1 to 4) and then remove the VF case (lower).
3. Remove the VF case (upper) while extending it by one side.

Note 4e: *When assembling the VF case (upper), carefully set it so that the stud of the LCD case assembly (upper) is put in the groove of the VF case (upper). After that, check to see if the VF case slides smoothly.*

4. Remove the four screws (5 to 8) and then remove the hinge assembly.

Note 4a: *When removing the hinge assembly, pay heed to the FPC assembly not to damage it.*

5. Remove the LCD case (lower) while unhooking it by the four points (L4a).

Note 4d: *When assembling the LCD case (lower), pay heed to the FPC wire not to break it.*

Note 4c: *When assembling, carefully proceed in the work not to damage any switch.*

6. Remove the LCD assembly together with the FPC assembly.

Note 4b: *When removing the LCD assembly and FPC assembly, be very careful not to damage the FPC assembly.*

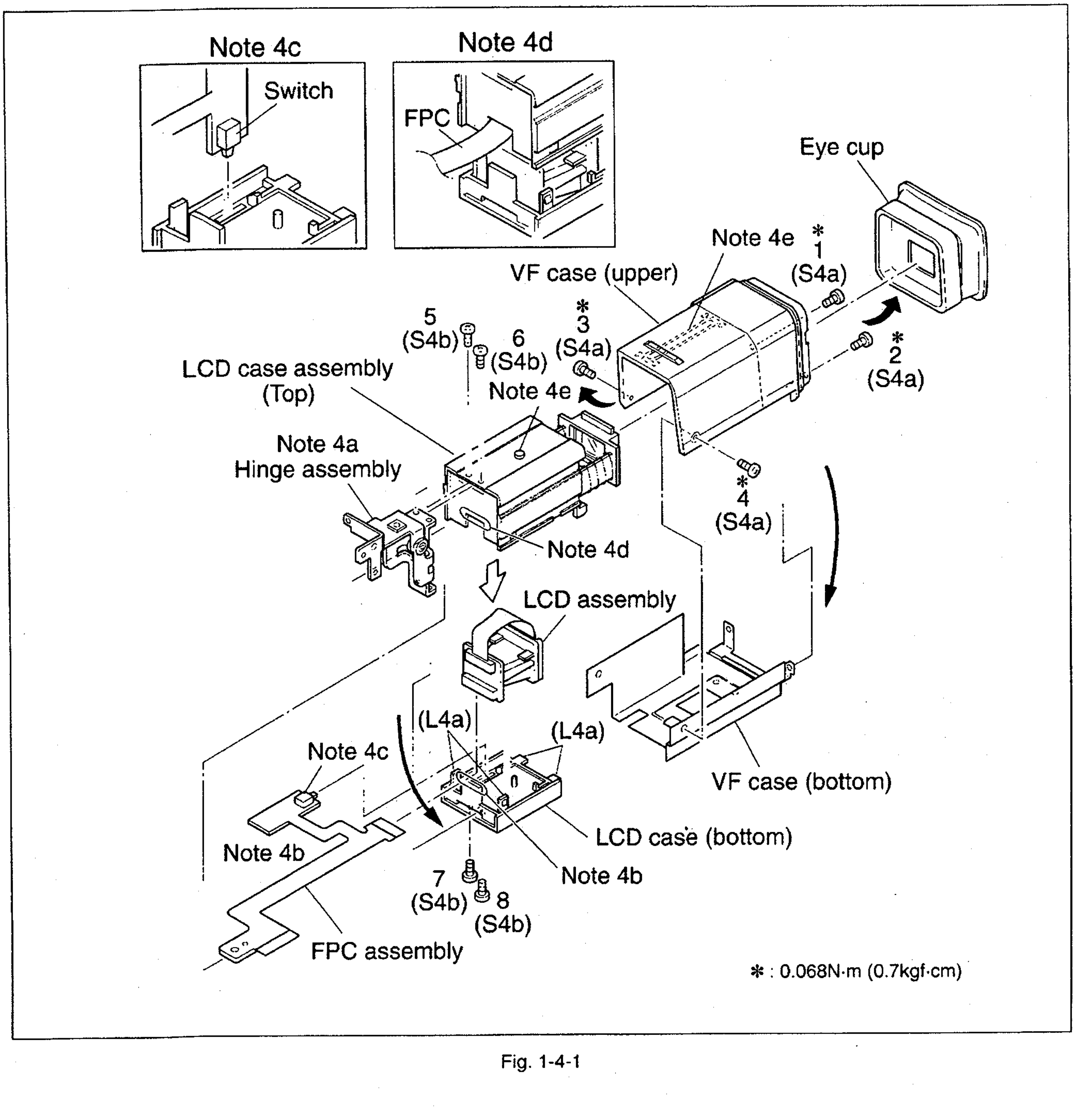

Note 4c
Switch
Note 4d
FPC
Eye cup
Note 4e
✱
1
(S4a)
VF case (upper)
5
(S4b)
6
(S4b)
✱
3
(S4a)
✱
2
(S4a)
LCD case assembly
(Top)
Note 4e
Note 4a
Hinge assembly
✱
4
(S4a)
Note 4d
LCD assembly
(L4a)
(L4a)
Note 4c
VF case (bottom)
LCD case (bottom)
Note 4b
Note 4b
7
(S4b)
8
(S4b)
FPC assembly
✱ : 0.068N·m (0.7kgf·cm)

Fig. 1-4-1

1.5 DISASSEMBLY/ASSEMBLY OF MONITOR ASSEMBLY

1.5.1 Monitor assembly/Hinge assembly

1. Remove the six screws (1 to 6). While disengaging the six hooks (L5a to L5f) one after another, remove the monitor cover assembly. Then, disconnect the FPC from the connector ⓐ.
2. Remove the parts from the monitor case assembly and unlock the two connectors (ⓑ, ⓒ). While lifting the hinge assembly upwards, disconnect the FPC and then remove the hinge assembly.
3. Remove the two screws (7, 8) and the bracket (button) also.
4. Disconnect the FPC from the connector ⓓ and then remove the MONITOR board assembly and the backlight.
5. While unhooking the LCD module by the 5 points (L5g), remove the LCD module.
6. Remove the two screws (S5d). Then, remove the hinge covers (1), (2) while unhooking it by four points (L5h).
7. Remove the FPC assembly from the hinge assembly.

Note 5a: *Don't reuse the screw that was once removed, because screw locking agent was applied to it.*

Note 5b: *When removing the monitor cover assembly, pay heed to the FPC and connectors not to damage them.*

Note 5c: *When removing/reinstalling the hinge assembly, carefully proceed in the work not to damage any part.*

Note 5d: *For disconnecting the FPC from the connector, unlock the connector first and then draw out the hinge assembly together with the FPC so that it is pulled out of the connector.*

Note 5e: *The backlight is soldered to the MONITOR board assembly. When removing the backlight individually, unsolder it by two points.*

Note 5f: *Carefully arrange the FPC.*

Note 5g: *Be careful not to lose the magnet.*

Note 5h: *When reinstalling the FPC assembly, wind it on the hinge assembly by three and a half turns.*

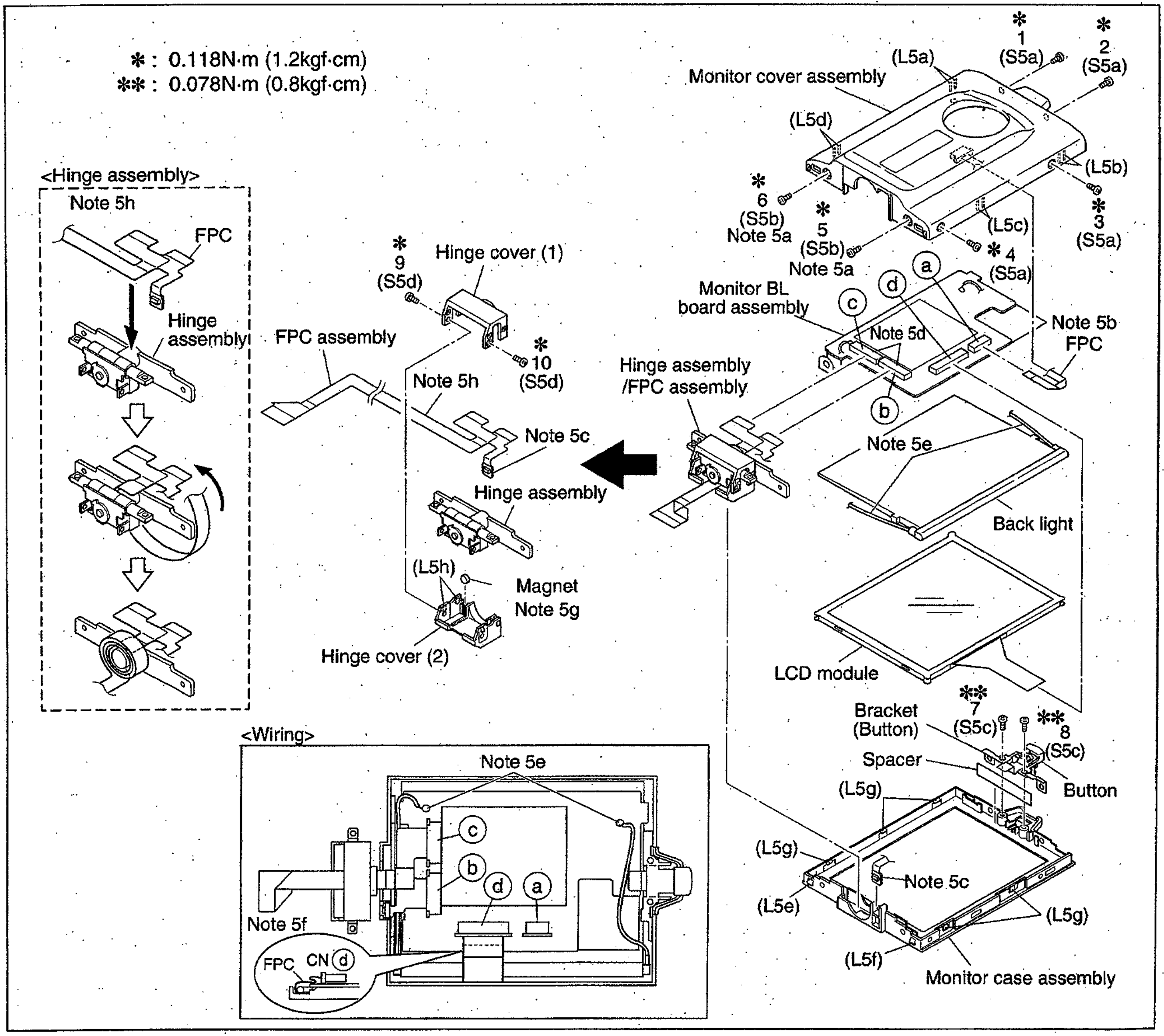

*: 0.118N·m (1.2kgf·cm)
**: 0.078N·m (0.8kgf·cm)
<Hinge assembly>
Note 5h
FPC
Hinge assembly
FPC assembly
*
9
(S5d)
Hinge cover (1)
*
10
(S5d)
Note 5h
Note 5c
Hinge assembly
(L5h)
Magnet
Note 5g
Hinge cover (2)
Hinge assembly
/FPC assembly
Monitor cover assembly
(L5a)
*
1
(S5a)
*
2
(S5a)
(L5d)
(L5b)
*
6
(S5b)
Note 5a
*
5
(S5b)
Note 5a
(L5c)
*4
(S5a)
*
3
(S5a)
Monitor BL
board assembly
ⓐ
ⓓ
ⓒ
Note 5d
ⓑ
Note 5b
FPC
Note 5e
Back light
LCD module
Bracket
(Button)
**
7
(S5c)
**
8
(S5c)
Spacer
Button
(L5g)
(L5g)
Note 5c
(L5e)
(L5g)
(L5f)
Monitor case assembly
<Wiring>
Note 5e
ⓒ
ⓑ
ⓓ
ⓐ
Note 5f
FPC
CN ⓓ

Fig. 1-5-1

1.6 DISASSEMBLY OF OP BLOCK ASSEMBLY/CCD BOARD ASSEMBLY

1.6.1 Precautions

1. Through disassembling/reassembling work, pay the most careful attention to the CCD image sensor, optical LPF, lens and so on so as to prevent them from getting dusty, soiled, scratched on the surface. If some of them gets soiled with fingerprints, etc., wipe it out with silicone paper, clean chamois, and super cleaning cloth recommended by JVC, etc.
2. The new CCD image sensor is occasionally shipped from the factory as a protection seal is applied onto its transparent glass. If so, leave the protection seal as it is and remove it just before installing it in the OP block assembly.

1.6.2 How to remove OP block assembly and CCD board assembly

1. Remove the shield seat (OP) that secures the CCD board assembly and OP block assembly.

Note 6a: *When sticking the shield seat again after it was once removed, carefully set it as it was before.*

2. Unsolder the CCD board assembly by the 16 points (SD1).

Note 6b: *Be sure to remove the parts on the soldered side of the board assembly before unsoldering, it there is something.*

2. Remove the three screws (1 to 3) and then remove the CCD board assembly.
3. Remove the two screws (4, 5) and the CCD base assembly also.

Note 6c: *When removing the CCD base assembly, carefully proceed in the work not to remove the spacer rubber or/and optical LPF together with the CCD base assembly.*

Note 6d: *Don't replace the CCD image sensor individually but replace it in a set of the CCD base assembly.*

1.6.3 How to reassemble OP block assembly/CCD board assembly

1. Install the optical LPF in the OP block assembly as the spacer rubber is fitted to the CCD side of the optical LPF.
2. Paying heed to the spacer rubber not to move it out of the right position, set the CCD base assembly and fasten it together with the spacer rubber with the two screws (4. 5).
3. Fasten the CCD board assembly with the three screws (1 to 3) first. Then, set it in the CCD base assembly and secure them by soldering at the 16 points (SD1).

Note 6e: *If some part was removed before removing the board assembly, restore it to the original place taking care not to make any shortcircuit.*

4. Stick the shield seat (OP) to the CCD board assembly and OP block assembly to secure them.

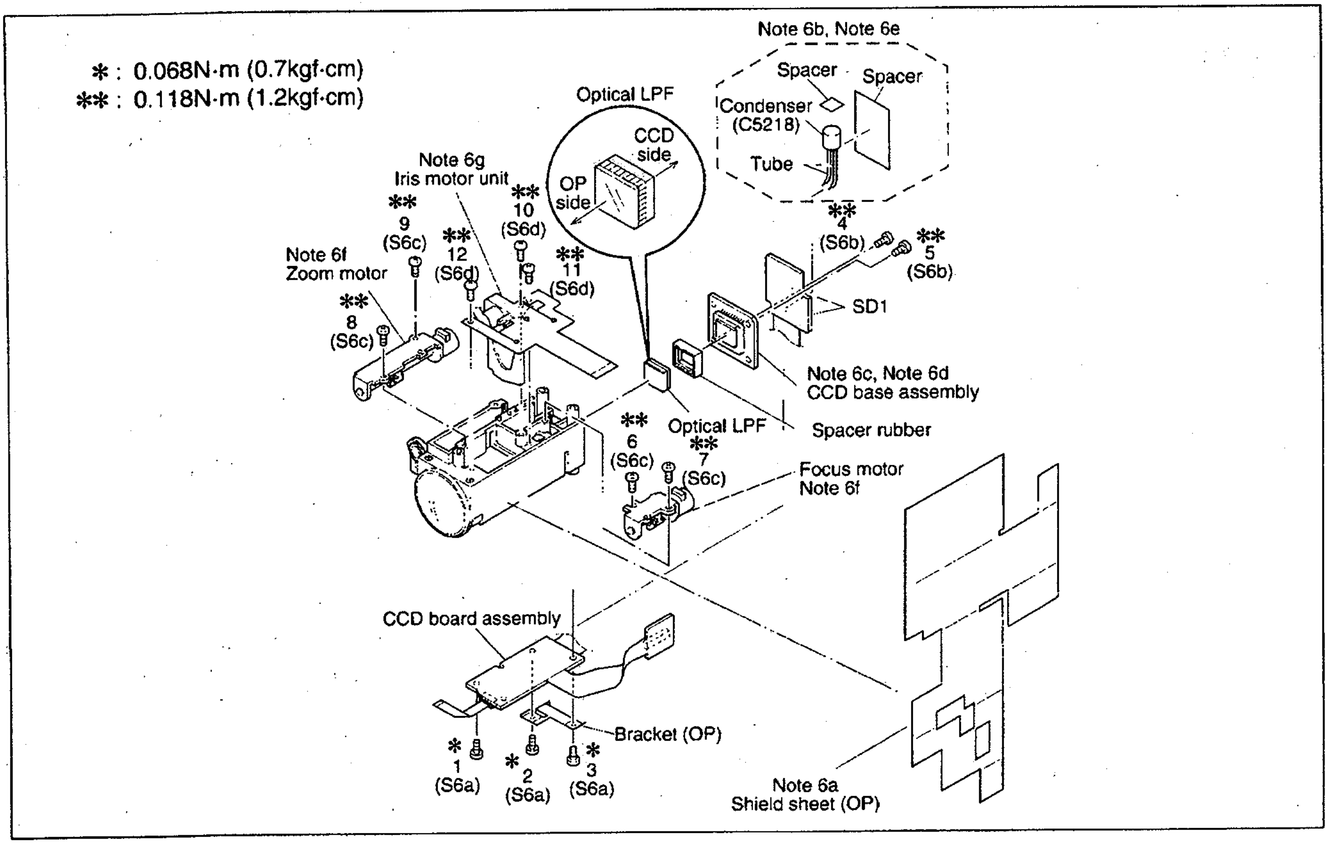
1.6.4 Replacement of service parts

Service parts to be supplied for the OP block assembly are as follows.
When replacing a part, be very careful not to get the FPC wire broken or damaged by overheating caused by soldering.

1. Focus motor
2. Zoom motor
3. Iris motor unit

Note 6f: *When soldering the wire of a new focus motor/zoom motor after replacement, be sure to keep the tip of a soldering iron approximately 1 mm apart from the terminal.*

Note 6g: *The iris motor unit includes the FPC assembly and the two sensors.*



* : 0.068N·m (0.7kgf·cm)
** : 0.118N·m (1.2kgf·cm)
Note 6b, Note 6e
Spacer
Spacer
Condenser
(C5218)
Tube
Optical LPF
CCD side
OP side
Note 6g
Iris motor unit
** 9 (S6c)
** 10 (S6d)
** 12 (S6d)
** 11 (S6d)
Note 6f
Zoom motor
** 8 (S6c)
** 4 (S6b)
** 5 (S6b)
SD1
Note 6c, Note 6d
CCD base assembly
Spacer rubber
** 6 (S6c)
Optical LPF
** 7 (S6c)
Focus motor
Note 6f
CCD board assembly
Bracket (OP)
* 1 (S6a)
* 2 (S6a)
* 3 (S6a)
Note 6a
Shield sheet (OP)

Fig. 1-6-1

1.7 CONNECTION OF CONNECTORS

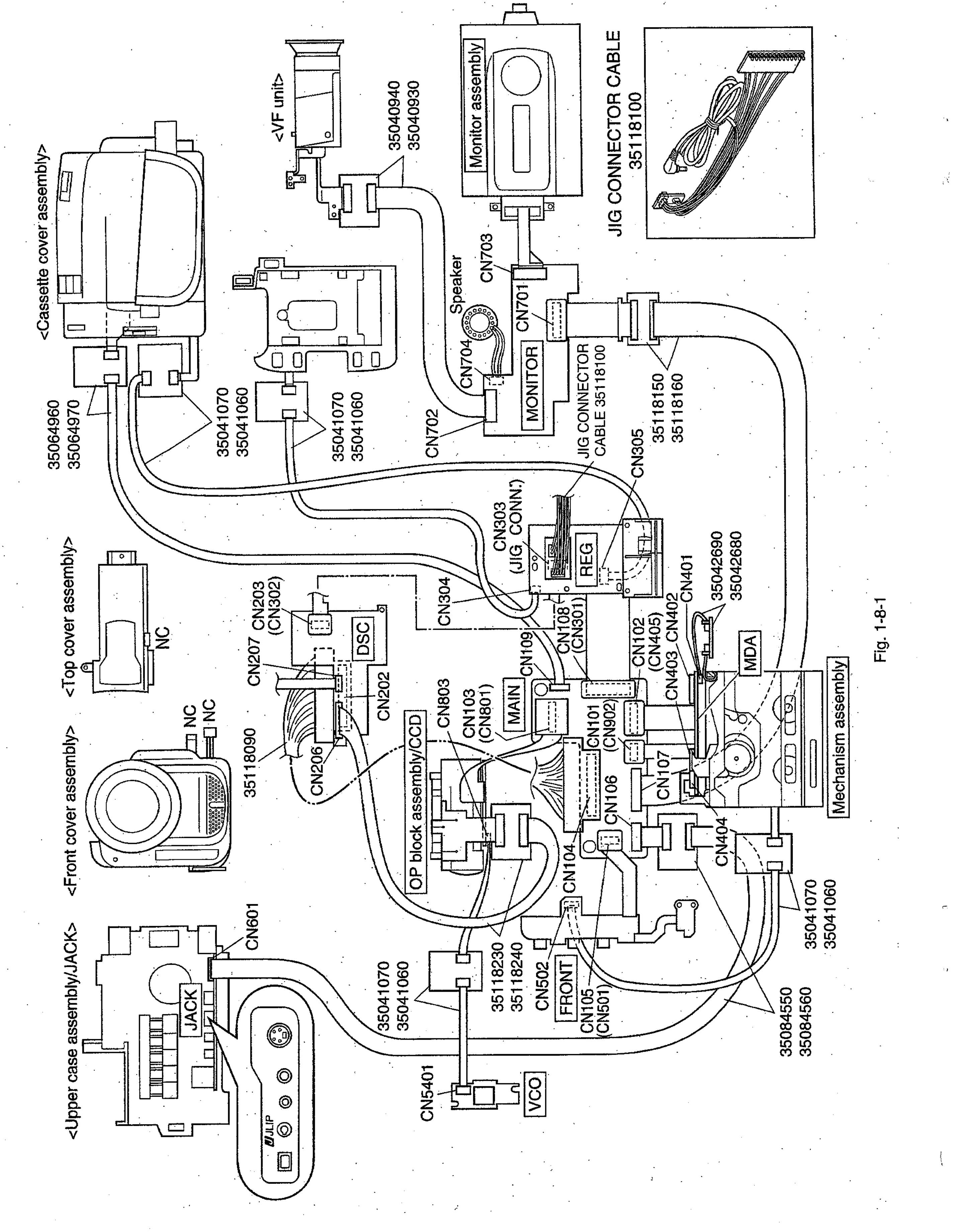
LIST<DISASSEMBLY>

▨ :Connector of removed component during disassembly

No.	Fig No.	Symbol	Connected point					Pin No.	Class	Note / Patch cord
1	Fig.1-3-1	Ⓐ	STROBE UNIT	-	←→	DSC PWB	CN207	12PIN	FPC	NC
2	Fig.1-3-1	Ⓑ	DSC PWB	CN205	←→	LENS SHUTTER UNIT	-	8PIN	FPC	NC
3	Fig.1-3-1	Ⓒ	DSC PWB	CN204	←→	MIC UNIT	-	3PIN	WIRE	NC
4	Fig.1-3-2	Ⓓ	JACK PWB	CN601	←→	MAIN PWB	CN106	33PIN	FPC	35084550/35084560
5	Fig.1-3-2	Ⓔ	MONITOR PWB	CN701	←→	MAIN PWB	CN107	57-60PIN	(B-B)	35118150/35118160
6	Fig.1-3-3	Ⓕ	MONITOR PWB	CN702	←→	VF BL PWB	CN7551	22-20PIN	FPC	35040940/35040930
7	Fig.1-3-4	Ⓖ	MONITOR PWB	CN703	←→	MONITOR BL PWB	CN7501/CN7502	39PIN(18+18+3)	FPC	DIRECT
8	Fig.1-3-5	Ⓗ	MONITOR PWB	CN704	←→	SPEAKER	-	2PIN	WIRE	DIRECT
9	Fig.1-3-6	Ⓙ	DSC PWB	CN203	←→	REG PWB	CN302	30PIN	(B-B)	DIRECT
10	Fig.1-3-6	Ⓚ	DSC PWB	CN206	←→	OP BLOCK	-	24PIN	FPC	35118230/35118240
11	Fig.1-3-6	Ⓛ	DSC PWB	CN202	←→	MAIN PWB	CN104	130PIN	B-B	35118090
12	Fig.1-3-8	Ⓜ	MAIN PWB	CN105	←→	FRONT PWB	CN501	30PIN	(B-B)	DIRECT
13	Fig.1-3-8	Ⓝ	MAIN PWB	CN101	←→	PRE/REC PWB	CN902	20PIN	(B-B)	DIRECT
14	Fig.1-3-8	Ⓞ	MAIN PWB	CN102	←→	MDA PWB	CN405	40PIN	(B-B)	DIRECT
15	Fig.1-3-8	Ⓟ	MAIN PWB	CN108	←→	REG PWB	CN301	80PIN	(B-B)	DIRECT
16	Fig.1-3-8	Ⓠ	MAIN PWB	CN103	←→	CCD PWB	CN801	60PIN	(B-B)	DIRECT
17	Fig.1-3-8	Ⓡ	MAIN PWB	CN109	←→	POWER UNIT	-	12PIN	FPC	35064960/35064970
18	Fig.1-3-9	Ⓢ	VCO PWB	CN5401	←→	CCD PWB	CN803	6PIN	FPC	35041070/35041060
19	Fig.1-3-10	Ⓣ	REG PWB	CN305	←→	ZOOM UNIT	-	6PIN	FPC	35041070/35041060
20	Fig.1-3-11	Ⓤ	REG PWB	CN304	←→	DECK OPE	-	6PIN	FPC	35041070/35041060
21	Fig.1-3-12	Ⓥ	FRONT PWB	CN502	←→	ROTARY ENCODER	-	6PIN	FPC	35041070/35041060
22	Fig.1-3-13b	Ⓦ	MDA PWB	CN404	←→	LOADING MOTOR	-	6PIN	FPC	DIRECT
23	Fig.1-3-13b	Ⓧ	MDA PWB	CN402	←→	CAPSTAN MOTOR	-	18PIN	FPC	DIRECT
24	Fig.1-3-13b	Ⓨ	MDA PWB	CN403	←→	DRUM MOTOR	-	11PIN	FPC	DIRECT
25	Fig.1-3-13c	Ⓩ	MDA PWB	CN401	←→	SENSOR	-	15PIN	FPC	35042690/35042680
26	Fig.1-3-14	ⓐ	PRE/REC PWB	CN901	←→	HEAD	-	8PIN	FPC	DIRECT
27	-	-	REG PWB	CN303	←→	JIG CONN.	-	30PIN	B-B	35118100
28	Fig.1-5-1	ⓐ	MONITOR BL PWB	CN7504	←→	DIAL PWB	CN1301	6PIN	FPC	-
29	Fig.1-5-1	ⓑ	MONITOR BL PWB	CN7502	←→	MONITOR BL PWB	CN703	18-39PIN	FPC	-
30	Fig.1-5-1	ⓒ	MONITOR BL PWB	CN7501	←→	MONITOR BL PWB	CN703	18-39PIN	FPC	-
31	Fig.1-5-1	ⓓ	MONITOR BL PWB	CN7503	←→	LCD MODULE	-	24PIN	FPC	-

Table 1-7-1

1.8 CONNECTION OF CONNECTORS (PATCH CORDS)



<Cassette cover assembly>
<VF unit>
Monitor assembly
JIG CONNECTOR CABLE
35118100
35040940
35040930
Speaker
CN703
CN701
CN704
CN702
MONITOR
JIG CONNECTOR CABLE 35118100
35118150
35118160
35064960
35064970
35041070
35041060
35041070
35041060
CN305
CN303
(JIG CONN.)
REG
CN304
CN108
(CN301)
CN401
35042690
35042680
<Top cover assembly>
NC
CN203
(CN302)
DSC
CN207
CN202
CN109
CN102
(CN405)
CN402
CN403
MDA
<Front cover assembly>
NC
NC
35118090
CN206
CN803
CN103
(CN801)
MAIN
CN101
(CN902)
CN107
Mechanism assembly
OP block assembly/CCD
CN106
CN104
CN404
<Upper case assembly/JACK>
CN601
JACK
JLIP
35041070
35041060
35118230
35118240
CN502
FRONT
CN105
(CN501)
35084550
35084560
35041070
35041060
CN5401
VCO

Fig. 1-8-1

1.9 HOW TO TAKE OUT CASSETTE TAPE

If the cassette tape cannot be ejected out of the cassette housing because of some electrical failure, take it out manually in the way mentioned below.

From viewpoints of workability and reliability, it is recommended to dismantle the covers and exterior components so that the cassette tape can be taken out from the cassette housing without trouble, because the following is an emergency measure to the end.

1. Disconnect the power source (battery, DC cord) from the set.
2. Open the cassette cover and remove the four screws from both sides.

Note: *Don't reuse the screw that was once removed, because screw locking agent was applied to the tip of the respective screws. Be sure to use new screws when refitting the cassette cover to the set.*

If the exterior component (lower case assembly in this case) is removed for taking out the cassette tape, it is needless to remove those screws.

3. Detach the cassette cover from the arms, and open it to the full extent paying heed to the FPC.

Note: *Pay careful attention to the FPC not to break its wire and not to damage itself, because the FPC is connected between the cassette cover and main body.*

4. Supply 3 V DC to the electrodes of the loading motor in order to slide the slide deck assembly frontwards, and stop the power supply when both the pole bases come into the unloading status inside the tape. Be careful not to damage or soil the tape with grease, etc., because the tape has not been wound up in this condition. If unloading operation continues after both the pole bases have returned inside the tape, the mechanism enters the eject mode and the cassette housing assembly is raised up. Be very careful not to get the mechanism to fall into such the situation, for, such the status may damage the tape because the slack part of the tape may be possibly caught in the cassette lid. After the cassette cover is opened, hold it remaining open with adhesive tape or the like so that it does not shut down as the cassette housing assembly is raised up. (Refer to Fig. 1-9-1)
5. Take in the slack of the tape by turning the center gear assembly with a sharp-pointed thing (for example, the chip IC replacing jig, etc.) in the direction of the arrow. Be careful not to damage the tape during winding.

   If the tape cannot be wound up by turning the center gear assembly, it is caused by the wrong mechanism mode in which the idler arm assembly and reel disk assembly are badly engaged with each other. In such the case, shift the mechanism mode so as to slightly return to the loading direction and fine adjust it.
6. Make sure that the slack of the tape is completely taken up, and make the mechanism continue unloading mode until it reaches the eject position. Then, take out the cassette tape.
7. After taking the cassette tape out of the cassette housing, check to see if the tape is not soiled with grease, etc. At the same time, check the mechanism assembly, particularly the tape transport system, if there is nothing soiled.

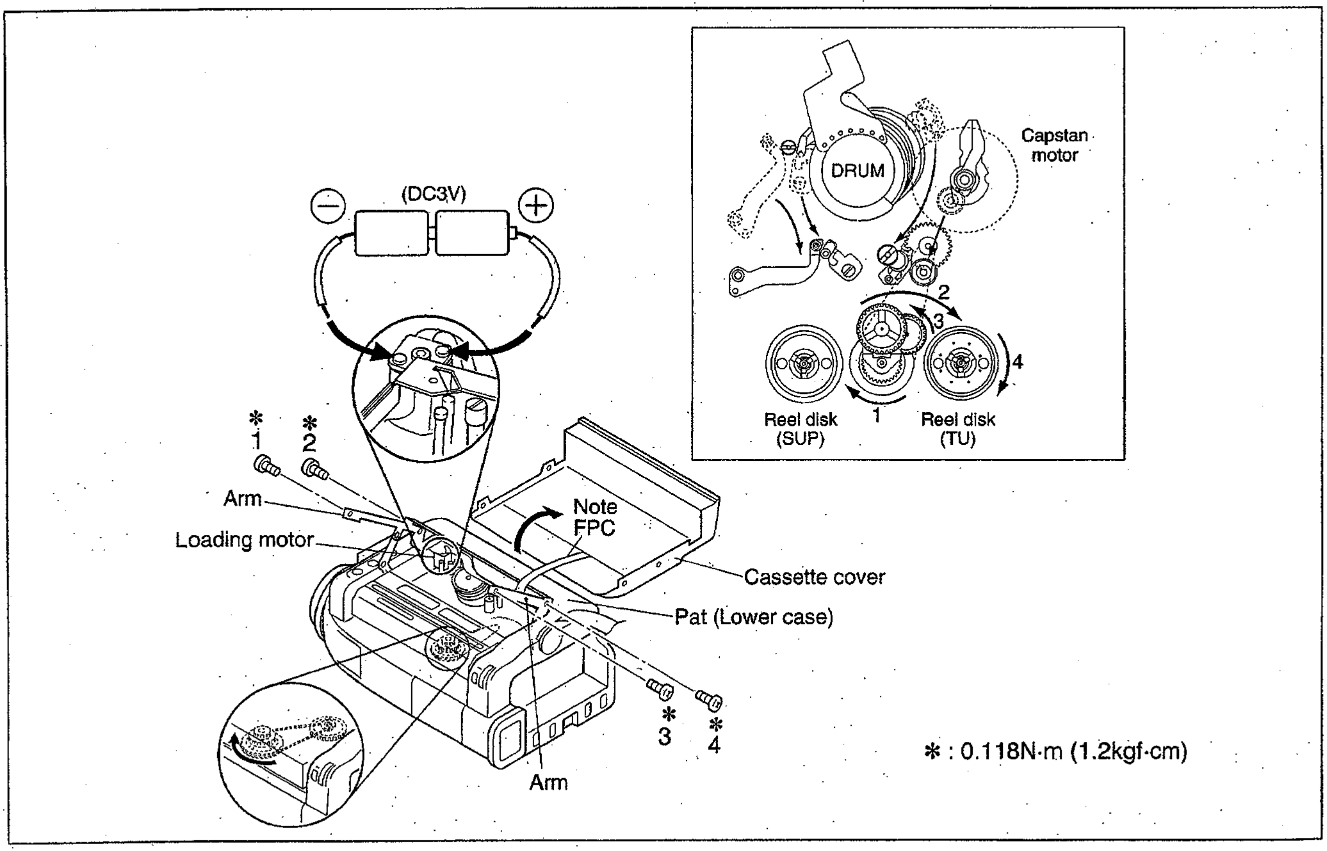


Fig. 1-9-1

1.10 SERVICE NOTE

<CABINET(DECK/CAMERA/MECHANISM)>

Symbol No. →	①/②								③/④/⑤							④		⑤	
Removing order of screw →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Place to stick screw →																		*	*
Reference drawing →	Fig.1-3-1								Fig.1-3-2							Fig.1-3-3		Fig.1-3-4	
Screw tightening torque →	I								I	I	I	I	I	II	II	I		III	

Symbol No. →	⑥	⑦				⑧			⑨		⑩	⑪			⑫/⑬				⑬				
Removing order of screw →	20	21	22	23	24	25	26	27	28	29	–	30	31	32	33	34	35	36	37	38	39	40	41
Place to stick screw →											–												
Reference drawing →	Fig.1-3-5					Fig.1-3-6			Fig.1-3-7		Fig.1-3-8	Fig.1-3-9			Fig.1-3-10				Fig.1-3-11				
Screw tightening torque →	I					I			II		–	IV	I		IV	V	IV	V	V	I			

Symbol No. →	⑭					⑮	⑯/⑰/⑱			⑯		⑯	⑰		⑱	
Removing order of screw →	42	43	44	45	46	47	48	49	50	51	52	–	53	54	55	56
Place to stick screw →												–	Fig.1-3-14		Fig.1-3-15	
Reference drawing →	Fig.1-3-12						Fig.1-3-13a			Fig.1-3-13b		Fig.1-3-13c				
Screw tightening torque →	V	IV	IV	IV	IV	IV	I	I	I	I		–	II		II	

<VF UNIT>

	VF CASE(U/B)				LCD CASE(U/B)/HINGE			
Removing order of screw →	1	2	3	4	5	6	7	8
Place to stick screw →					*	*	*	*
Reference drawing →	Fig.1-4-1							
Screw tightening torque →	II				I			

<MONITOR>

	MONITOR COVER						BRACKET		HINGE	
Removing order of screw →	1	2	3	4	5	6	7	8	9	10
Place to stick screw →					*	*				
Reference drawing →	Fig.1-5-1									
Screw tightening torque →	IV						V		IV	

<OP BLOCK>

	CCD			CCD BASE		FOCUS M		ZOOM M		IRIS M		
Removing order of screw →	1	2	3	4	5	6	7	8	9	10	11	12
Place to stick screw →												
Reference drawing →	Fig.1-6-1											
Screw tightening torque →	II			IV								

M:MOTOR

<CASSETTE COVER ASSY>

	CASSETTE COVER ASSY			
Removing order of screw →	1	2	3	4
Place to stick screw →	*	*	*	*
Reference drawing →	Fig.1-9-1			
Screw tightening torque →	IV			

<NOTE>

1) * : *Don't reuse the screw, because screw lock bond was applied to them.*

2) *Pay careful attention to tightening torque for each screw.*

I : 0.098N·m(1.0kgf·cm) II : 0.068N·m(0.7kgf·cm) III : 0.147N·m(1.5kgf·cm)

IV : 0.118N·m(1.2kgf·cm) V : 0.078N·m(0.8kgf·cm)

Fig. 1-10-1

1.11 EMERGENCY DISPLAY

LCD display	Emergency mode	Details	Possible cause
E01	LOADING	In the case the encoder position is not shifted to the next point though the loading motor has rotated in the loading direction for 4 seconds or more. This error is defined as [E01].	1. The mechanism is locked during mode shift. 2. The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift. 3. No power is supplied to the loading MDA.
E02	UNLOADING	n the case the encoder position is not shifted to the next point though the loading motor has rotated in the unloading direction for 4 seconds or more. This error is defined as [E02].	1. The mechanism is locked during mode shift. 2. The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift.
E03	TU & SP REEL FG	IIn the case no REEL FG is produced for 4 seconds or more in the capstan rotation mode after loading was complete, the mechanism mode is shifted to STOP with the pinch roller set off. This error is defined as [E03]. However, no REEL EMG is detected in the SLOW/STILL mode.	1. The idler gear does not engage with the reel disk well. 2. Though the idler gear and reel disk are engaged with each other, the tape is not wound because of overload to the mechanism. 3. No FG pulse is output from the reel sensor. 4. No power is supplied to the reel sensor. 5. Tape transport operation takes place with a cassette having no tape inside. 6. The tape slackens and no pulse is produced until the slack is taken up and the tape comes into the normal status.
E04	DRUM FG	In the case there is no DRUM FG input in the drum rotation mode for 4 seconds or more. This error is defined as [E04], and the mechanism mode is shifted to STOP with the pinch roller set off.	1. The drum cannot be started or drum rotation is stopped because tape transport load is too high. 1) Tape tension is extremely high. 2) The tape is damaged or soiled with grease, etc. 2. The DRUM FG signal is not received by the syscon CPU. 1) Disconnection in the middle of the signal line. 2) Failure of the DRUM FG pulse generator (hall element). 3. No drum control voltage is supplied to the MDA. 4. No power is supplied to the DRUM MDA.
E05	-	-	-
E06	CAPSTAN FG	In the case no CAPSTAN FG is produced in the capstan rotation mode for 2 seconds or more. This error is defined as [E06], and the mechanism mode is shifted to STOP with the pinch roller set off. However, no CAPSTAN EMG is detected in the STILL/FF/REW mode.	1. The CAPSTAN FG signal is not received by the syscon CPU. 1) Disconnection in the middle of the signal line. 2) Failure of the CAPSTAN FG pulse generator (MR element). 2. No capstan control voltage is supplied to the MDA. 3. No power is supplied to the CAPSTAN MDA. 4. The capstan cannot be started or capstan rotation is stopped because tape transport load is too high. 1) Tape tension is extremely high. (Mechanical locking) 2) The tape is damaged or soiled with grease, etc. (Tape tangling occurs, etc.)

Table 1-11-1

(DVC_02)

SECTION 2
MECHANISM ADJUSTMENT

2.1 PRELIMINARY REMARKS ON ADJUSTMENT AND REPAIR

2.1.1 Precautions

1. When fastening parts, pay careful attention to the tightening torque of each screw. Unless otherwise specified, tighten a screw with the torque of 0.039 N·m (0.4 kgf·cm).
2. Be sure to disconnect the set from the power supply before fastening and soldering parts.
3. When disconnecting/connecting wires, be careful not to get them and their connectors damaged. (Refer to the Section 1.)
4. When replacing parts, be very careful neither to damage other parts nor to fit wrong parts by mistake.

2.1.2 Necessary jigs

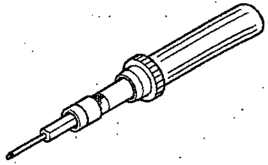
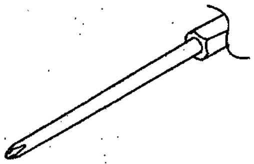
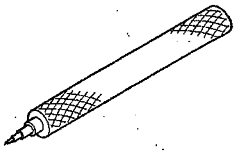
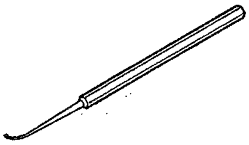
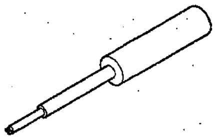
1 Torque driver 35027200	2 Bit 35081460
	
3 Slit washer fitting jig 35084500	4 Chip IC replacement jig 10361310
	
5 Guide driver 35084430	
	

Fig. 2-1-1

2.1.3 Notes on procedure for disassemby/assembly

The disassembling procedure table (Table 2-2-2 on page 22, a part of the table is shown below for reference) shows the procedure to disassemble/reassemble mechanism parts. Carefully read the following explanation before starting actual disassembling/reassembling work. The item numbers (circled numbers) in the following explanation correspond to those appearing under respective columns of the table.

(1) Circled numbers appearing in this column indicate the order to remove parts. When reassembling, follow these numbers in the reverse order. Circled numbers in this column correspond to those appearing in drawings of this section.

(2) This column shows part names corresponding to circled numbers in the left column.

(3) The symbol (T or B) appearing in this column shows the side which the objective part is mounted on.
T = the upper side, B = the lower side

(4) Symbols appearing in this column indicate drawing numbers.

(5) This column indicates parts and points such as screws, washers, springs, and others to be removed/fitted for disassembling/reassembling the mechanism. Besides such the parts, this column occasionally indicates working points.
P = Spring
W= Washer
S = Screw
* = Lock (L), soldering (SD), shield, connector (CN), etc.

Example
- Remove (W1) = Washer W1.
- * Remove the solder at (SD1) = Point SD1.
- * Disconnect Ⓐ = Connector Ⓐ.

(6) Numbers in this column represent the numbers of notes in the text. For example, "1" means "Note 1".
(For parts that need phase adjustment after reassembling, refer to "2.2.7 Check and adjustment of mechanism phase".)

(7) This column indicates required after-disassembling/-reassembling work such as phase adjustment or mechanism adjustment.

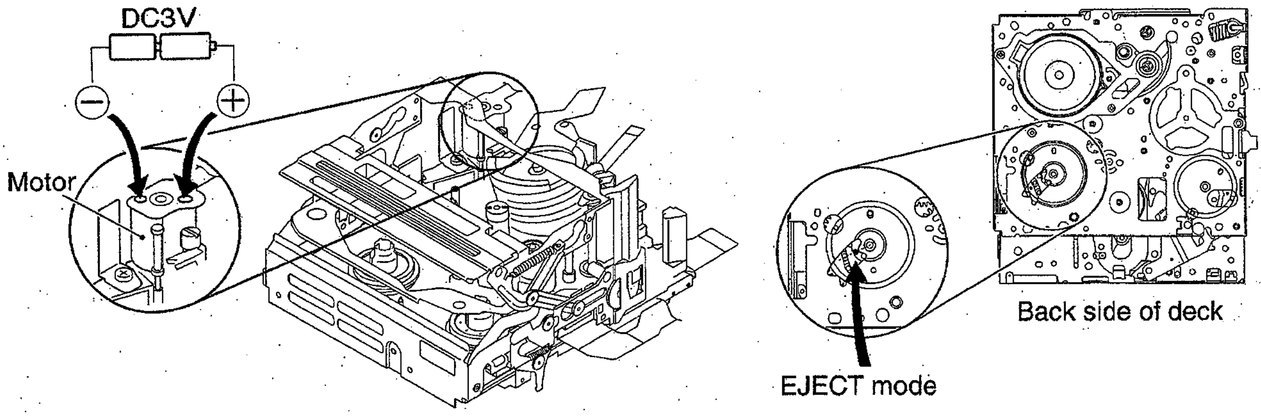
Step	Part Name		Fig.	Point	Note	Remarks
Ⓐ	Cassette housing assembly	T	1	3(S1),(L1a)-(L1d)	1a, 1b, 1c, 1d	Adjustment
(2a)	Reel disk (SUP) assembly	T	2	(W2)	2a, 2b	
(2b)	Reel disk (TU) assembly	T	2	(W2)	2a, 2b	
(2c)	Reel cover assembly	T	2	(S2b),2(S2a),(W2)	2d	
(3a)	Tension arm assembly	T	3	(W3a)	3b	
↑ (1)	↑ (2)	↑ (3)	↑ (4)	↑ (5)	↑ (6)	↑ (7)

2.2 DISASSEMBLY/ASSEMBLY OF MECHANISM ASSEMBLY

2.2.1 General statement

The mechanism should generally be disassembled/assembled in the EJECT mode (ASSEMBLY mode). (Refer to Fig. 2-2-1.)

However, when the mechanism is removed from the main body, it is set in the STOP mode. Therefore, it is required to shift the mechanism mode from the STOP mode to the EJECT mode after the mechanism is removed from the main body. In such the case, supply 3 V DC to the electrode on the top of the loading motor to enter the mechanism mode into the EJECT mode.



<Mechanism assembly/Cassette housing assembly>

<Back side of the mechanism assembly>

Fig. 2-2-1

2.2.2 Explanation of mechanism mode

The mechanism mode of this model is classified into six modes as shown in Table 2-2-1. Each mechanism mode can be distinguished from others by the relative position of "●" mark on the sub cam gear to the inner or outer protrusion on the main deck.

Refer to Fig. 2-2-2 to 2-2-7 below.

The EJECT mode, C IN mode and SHORT FF mode should be recognized by the relative position of the "●" mark to the inner protrusion, while the STOP mode, REV mode and PLAY mode should be recognized by that to the outer protrusion.

<EJECT mode>

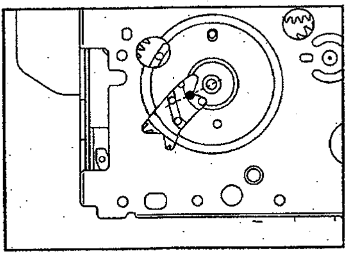


Fig. 2-2-2

<C IN mode>

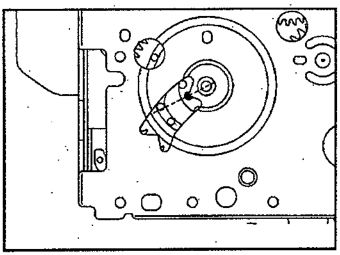


Fig. 2-2-3

<SHORT FF mode>

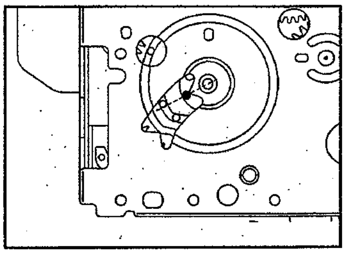


Fig. 2-2-4

<STOP mode>

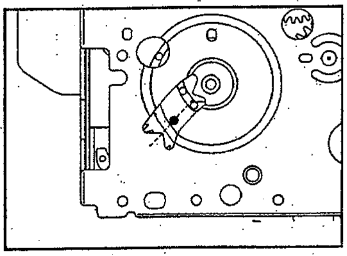


Fig. 2-2-5

<REV mode>

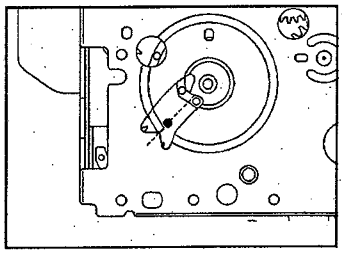


Fig. 2-2-6

<PLAY mode>

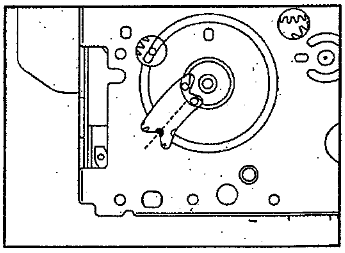


Fig. 2-2-7

2.2.3 Mechanism timing chart

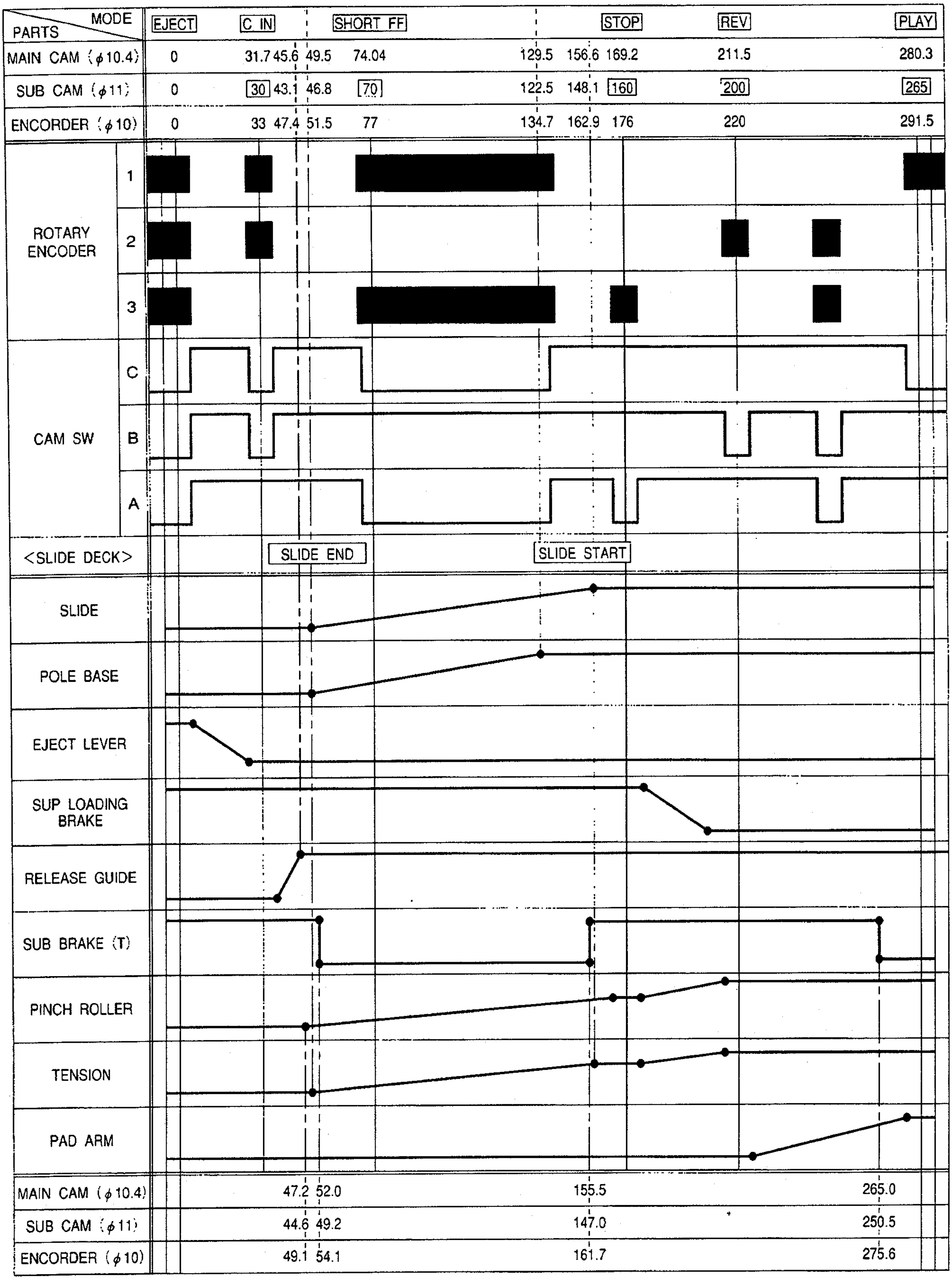

MODE
PARTS
EJECT
C IN
SHORT FF
STOP
REV
PLAY
MAIN CAM (φ10.4)
0
31.7
45.6
49.5
74.04
129.5
156.6
169.2
211.5
280.3
SUB CAM (φ11)
0
30
43.1
46.8
70
122.5
148.1
160
200
265
ENCORDER (φ10)
0
33
47.4
51.5
77
134.7
162.9
176
220
291.5
ROTARY ENCODER
1
2
3
CAM SW
C
B
A
<SLIDE DECK>
SLIDE END
SLIDE START
SLIDE
POLE BASE
EJECT LEVER
SUP LOADING BRAKE
RELEASE GUIDE
SUB BRAKE (T)
PINCH ROLLER
TENSION
PAD ARM
MAIN CAM (φ10.4)
47.2
52.0
155.5
265.0
SUB CAM (φ11)
44.6
49.2
147.0
250.5
ENCORDER (φ10)
49.1
54.1
161.7
275.6

Table 2-2-1

2.2.4 Disassembly/assembly of mechanism assembly

1. Configuration

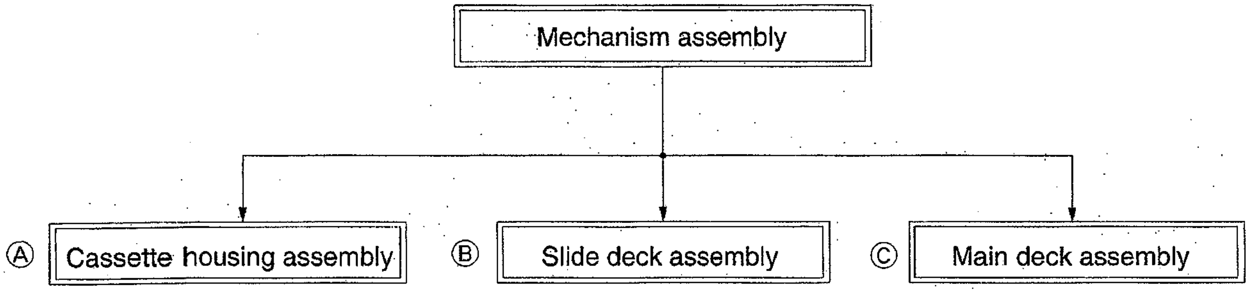

Mechanism assembly
Ⓐ Cassette housing assembly
Ⓑ Slide deck assembly
Ⓒ Main deck assembly

Fig. 2-2-8

2. Procedures for disassembly

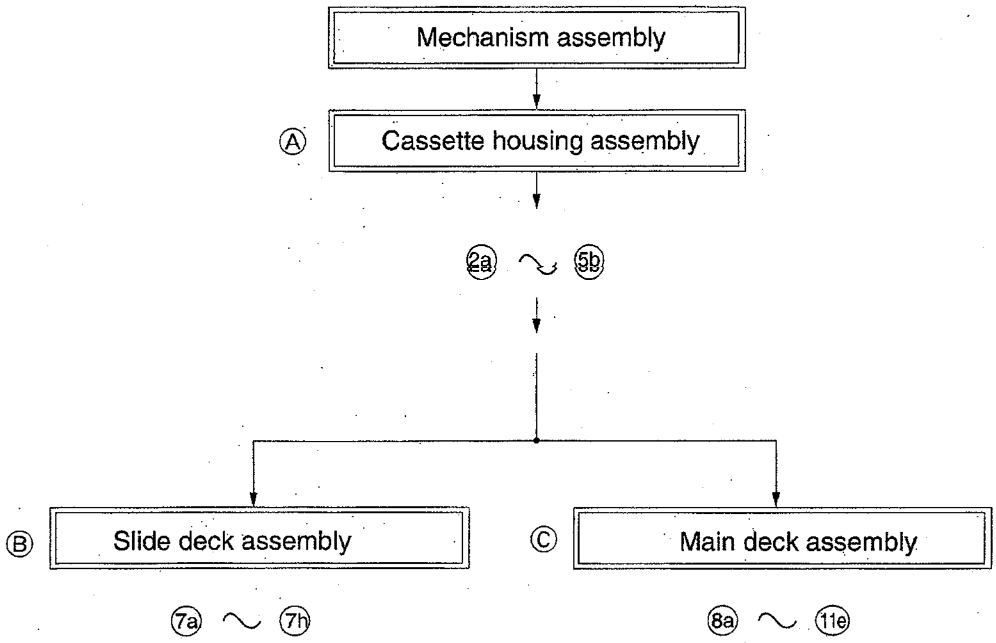

Mechanism assembly
Ⓐ Cassette housing assembly
2a ~ 5b
Ⓑ Slide deck assembly
Ⓒ Main deck assembly
7a ~ 7h
8a ~ 11e

Fig. 2-2-9

3. Disassembling procedure table

Step	Part Name		Fig.	Point	Note	Remarks
Ⓐ	Cassette housing assembly	T	1	3(S1),(L1a)-(L1d)	1a, 1b, 1c, 1d	Adjustment
(2a)	Reel disk (SUP) assembly	T	2	(W2)	2a, 2b	
(2b)	Reel disk (TU) assembly	T	2	(W2)	2a, 2b	
(2c)	Reel cover assembly	T	2	(S2b),2(S2a),(W2)	2d	
(3a)	Tension arm assembly	T	3	(W3a)	3b	
(3b)	Release guide assembly	T	3	-	3a	
(3c)	Idler arm assembly	T	3	(W3b)	-	
(3d)	Guide arm assembly	T	3	-	3a	
(3e)	Pinch roller arm assembly	T	3	(W3a)	-	
(4a)	Cleaner arm assembly	T	4	(L4a)	4a	
(4b)	Slant pole arm assembly	T	4	(W4),(L4b),(P4a),(P4b)	4c	
(4c)	Drum assembly	T	4	3(S4)	4b	
(5a)	Guide roller (S) assembly	T	5	(P5)	5a, 5b	
(5b)	Rail assembly	T	5	3(W5)	5c, 5d	
Ⓑ	Slide deck assembly / Ⓒ Main deck assembly	T	6	(W6),(L6a)-(L6d)	6a, 6b	(Adjustment)
Ⓑ	Slide deck assembly					
(7a)	Loading brake assembly	T	7	(W7),(L7a),(P7a)	7c	Adjustment
(7b)	Guide pin (SUPPLY)	T	7	(S7a)	-	
(7c)	Pad arm assembly	T	7	(W7),(L7b),(P7b)	7d	
(7d)	Slide guide plate assembly	T	7	(S7b)	7c	Adjustment
(7e)	Collar	T	7	-	7a	
(7f)	Collar	T	7	-	7a	
(7g)	Sub brake assembly	T	7	(W7),(L7c),(P7c)	7b	
(7h)	Control plate assembly	T	7	2(W7),(L7d),(P7d)	7b	
Ⓒ	Main deck assembly					
(8a)	Tension lever assembly	T	8	-	8c	
(8b)	Slide lever assembly	T	8	-	8b	
(8c)	Brake control lever assembly	T	8	-	8a	
(9a)	Loading guide	T	9	(S9)	-	
(9b)	Timing belt	T	9	-	9b	
(9c)	Center gear assembly	T	9	-	-	
(9d)	Motor bracket assembly	T	9	2(S9)	9a	
(9e)	Worm wheel	T	9	(W9)	-	(Phase adjustment)
(9f)	Gear holder	T	9	(S9)	-	
(10a)	Main cam gear	T	10	(S10)	10b	Phase adjustment
(10b)	Brake control plate	T	10	(L10)	10b	Phase adjustment
(10c)	Rotary encoder	T	10	(S10),(W10a)	10a	Phase adjustment
(10d)	Connect gear	T	10	(W10a)	-	(Phase adjustment)
(10e)	Reel drive pulley assembly	T	10	(W10b)	-	
(11a)	Catcher (T) assembly	T	11	2(S11)	-	
(11b)	Capstan motor	T	11	2(S11)	-	
(11c)	Charge arm assembly	T	11	(W11)	11	
(11d)	Sub cam gear	T	11	(S11)	-	Phase adjustment
(11e)	PWB holder	B	11	2(S11)	-	

Table 2-2-2

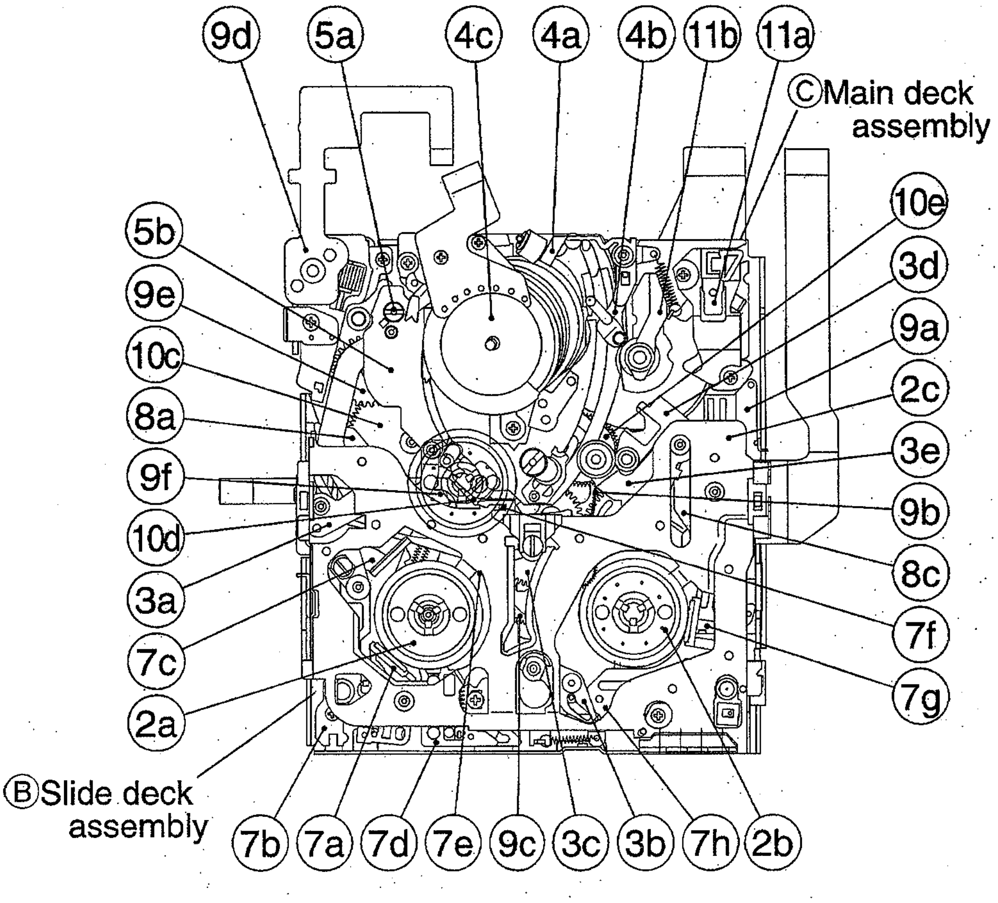

9d
5a
4c
4a
4b
11b
11a
Ⓒ Main deck assembly
10e
3d
9a
2c
3e
9b
8c
7f
7g
5b
9e
10c
8a
9f
10d
3a
7c
2a
Ⓑ Slide deck assembly
7b
7a
7d
7e
9c
3c
3b
7h
2b

Fig. 2-2-10 Top view

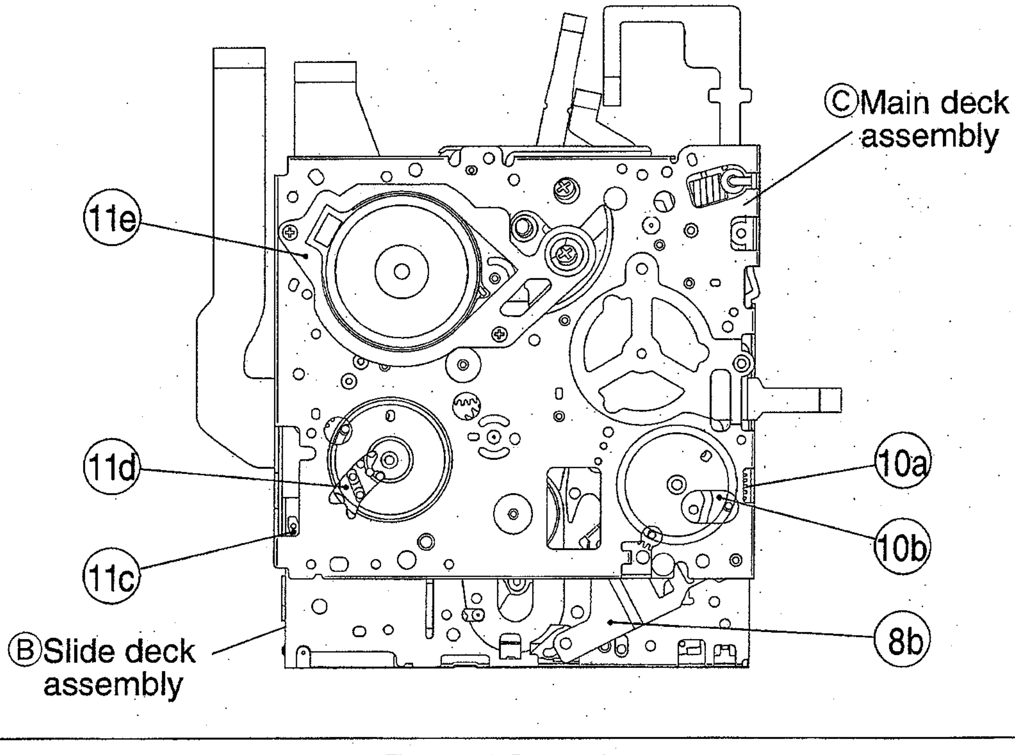

Ⓒ Main deck assembly
11e
11d
11c
Ⓑ Slide deck assembly
10a
10b
8b

Fig. 2-2-11 Bottom view

2.2.5 Disassembly/assembly

1. Ⓐ Cassette housing assembly

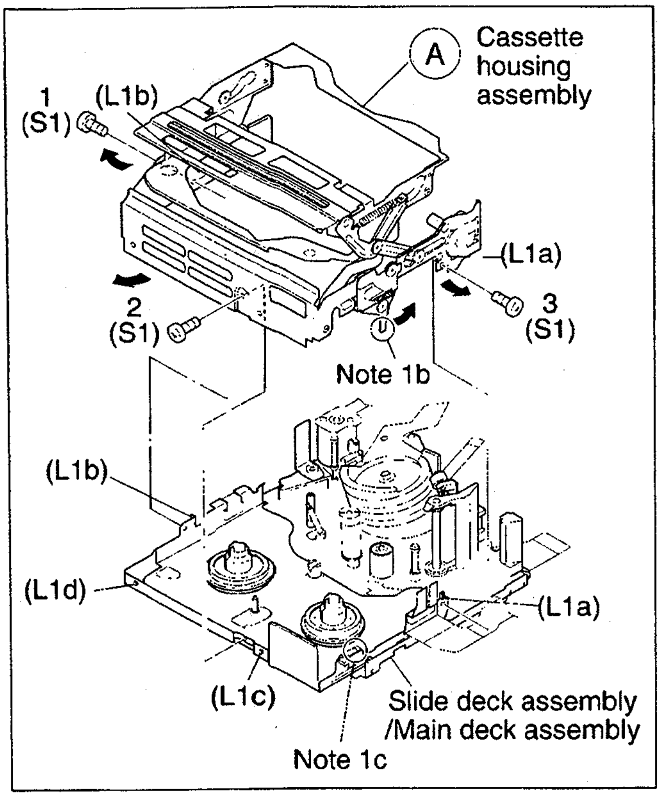
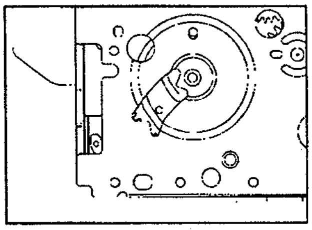
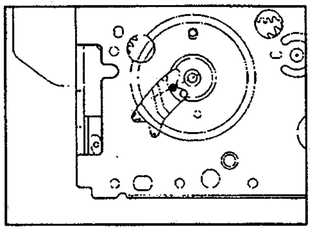

Ⓐ Cassette housing assembly
1 (S1)
(L1b)
(L1a)
2 (S1)
3 (S1)
Note 1b
(L1b)
(L1d)
(L1a)
(L1c)
Slide deck assembly /Main deck assembly
Note 1c

Fig. 1

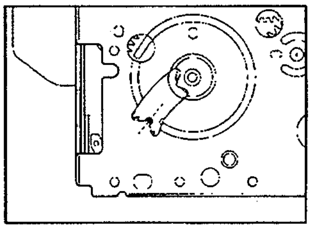
<STOP mode>



<EJECT mode>



<PLAY mode>



Note 1a:
Shift the mechanism mode from the STOP mode to the EJECT mode.

Note 1b:
Reassemble the cassette housing assembly to the mechanism as the cancel lever is moved in the direction of the arrow.

Note 1c:
When reassembling the cassette housing to the mechanism, make sure that there is no deformation in the frame or no damage to the switches, etc.

Note 1d:
After reassembling the component parts, check the mechanism operation in the PLAY mode.
For details of checking method, refer to "2.2.8 assembling slide deck assembly and main deck assembly".

2. ⓐ2a Reel disk (SUP) assembly
2b Reel disk (TU) assembly
2c Reel cover assembly

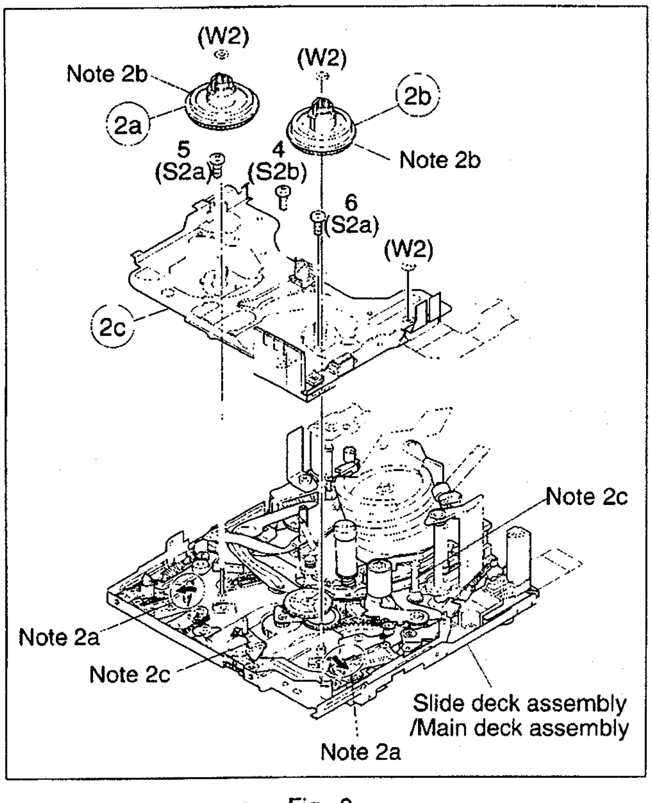
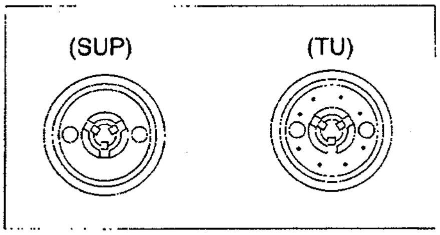

(W2)
(W2)
Note 2b
2a
2b
Note 2b
5 (S2a)
4 (S2b)
6 (S2a)
(W2)
2c
Note 2c
Note 2a
Note 2c
Slide deck assembly /Main deck assembly
Note 2a

Fig. 2

Note 2a:
When removing the reel disk assembly, be careful not to break the brake pad which applies lateral pressure to the reel disk.

Note 2b:
Be careful not to make a mistake in installing the reel disk. The SUP reel disk and TU reel disk can be distinguished from each other by the appearance as shown below.



Note 2c:
When removing the reel cover assembly, pay heed to the guide arm assembly. For, the guide arm assembly is just inserted into the slide deck assembly from the upside and it is apt to come off after the reel cover assembly is removed.

Note 2d:
When fitting the reel cover assembly to the set, carefully tighten the screw with the specified tightening torque of 0.068N·m (0.7kgf·cm).

3.(3a) Tension arm assembly/(3b) Release guide assembly (3c) Idler arm assembly/(3d) Guide arm assembly (3e) Pinch roller arm assembly

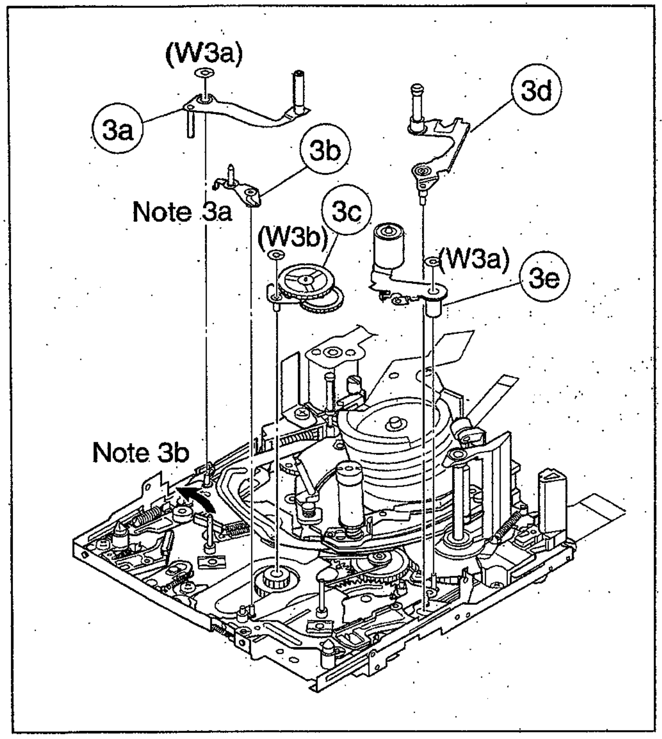
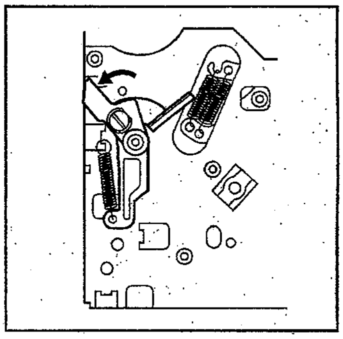

(W3a)
3a
3b
3d
Note 3a
3c
(W3b)
(W3a)
3e
Note 3b

Fig. 3

Note 3a:
When removing the reel cover assembly, pay heed to release guide assembly and guide arm assembly. For, the guide arm assembly is just inserted into the slide deck assembly from the upside and it is apt to come off after the reel cover assembly is removed.

Note 3b:
Reassemble the tension arm assembly to the mechanism as the pad arm assembly is moved to the extent in the direction of the arrow.



4.(4a) Cleaner arm assembly/(4b) Slant pole arm assembly (4c) Drum assembly

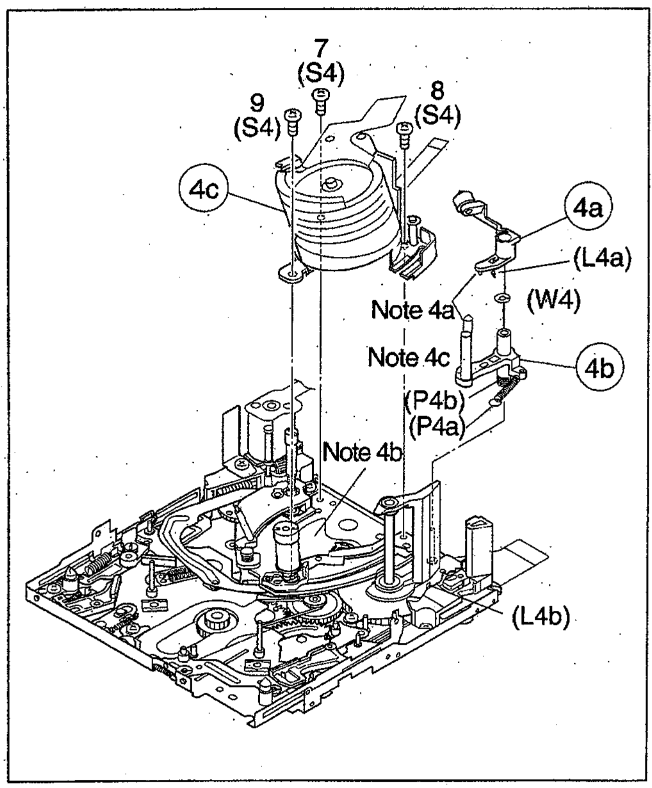
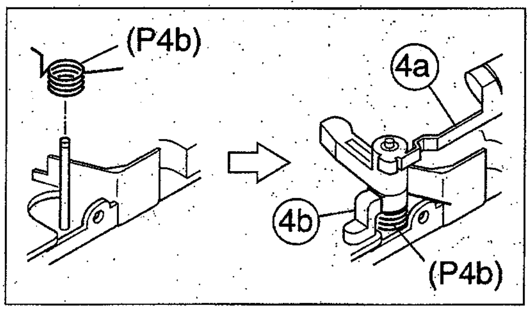

7
(S4)
9
(S4)
8
(S4)
4c
4a
(L4a)
Note 4a
(W4)
Note 4c
4b
(P4b)
(P4a)
Note 4b
(L4b)

Fig. 4

Note 4a:
When removing the cleaner arm assembly, it is recommended to remove the slant pole arm assembly together with it except the case of a single unit replacement, because the hook (L4a) is hard to disengage.

Note 4b:
When the shield is applied, carefully remove the drum final assembly because the drum is stuck to the shield.

Note 4c:
How to set the coil spring (P4b).


(P4b)
4a
4b
(P4b)

5. (5a) Guide roller (SUPPLY) assembly/(5b) Rail assembly

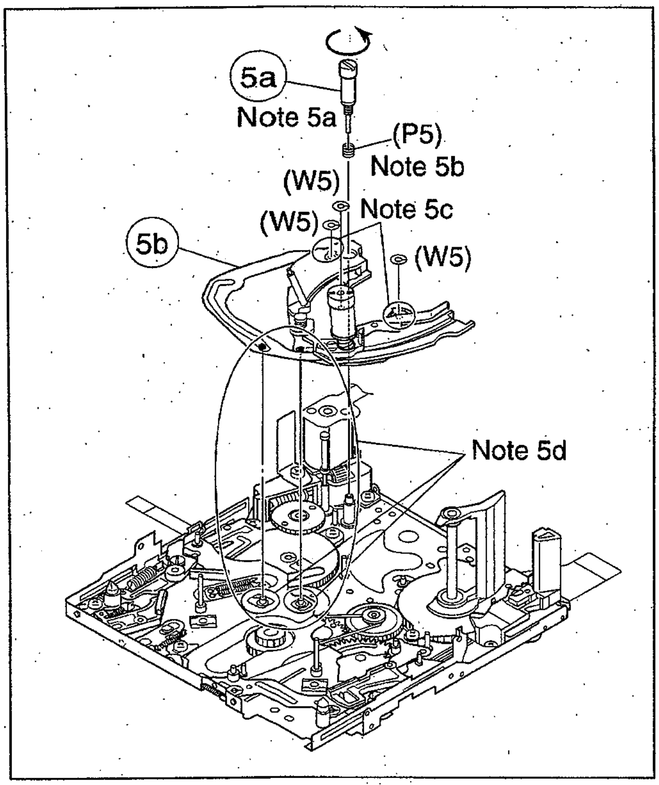

5a
Note 5a
(P5)
Note 5b
(W5)
(W5)
Note 5c
5b
(W5)
Note 5d

Fig. 5

Note 5a:
When removing the rail assembly, remove the guide roller (SUPPLY) assembly beforehand.

Note 5b:
Pay careful attention to the spring not to lose it.

Note 5c:
Pay careful attention to the engagement of the rail assembly's arm ends because they easily come off the engagement. Moreover, make sure that there is neither deformation nor damage observed in them.

Note 5d:
When removing the rail assembly, check to see if the collar is securely set in the arm groove.

6. Ⓑ Slide deck assembly/ Ⓒ Main deck assembly

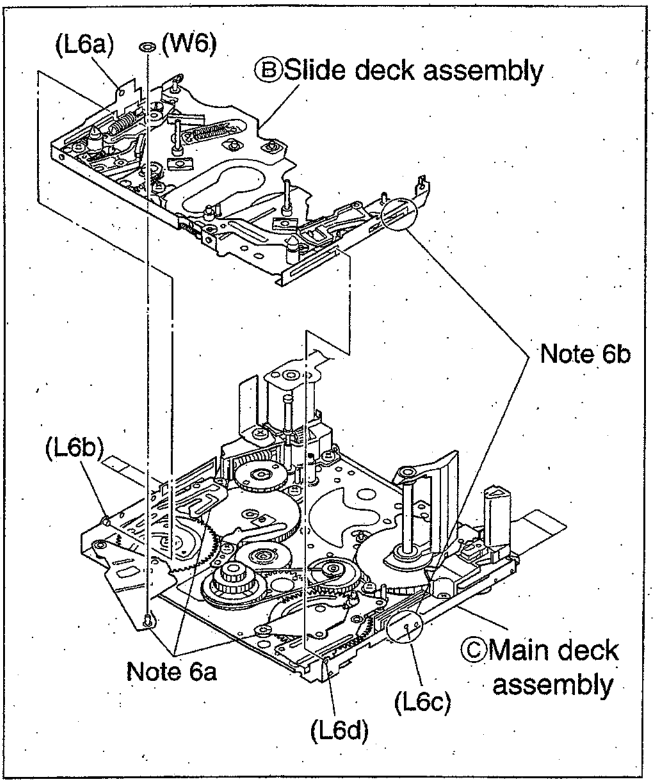
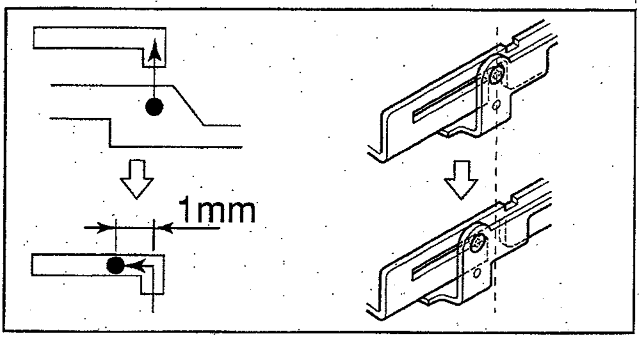

(L6a)
(W6)
ⒷSlide deck assembly
Note 6b
(L6b)
Note 6a
(L6c)
(L6d)
ⒸMain deck assembly

Fig. 6

Note 6a:
When removing the slide deck assembly, pay heed to the three components of the following because they are apt to come off after the slide deck assembly is removed.

(8a) Tension lever assembly/(8b) Slide lever assembly
(8c) Brake control lever assembly
For reassembling those components, refer to Fig. 8.

Note 6b:
When reassembling the slide deck assembly to the main deck assembly, combine them with each other by the side grooves and then slide the slide deck assembly by 1 mm or so.



7. (7a) Loading brake assembly/(7b) Guide pin (S) (7c) Pad arm assembly/(7d) Slide guide plate assembly (7e) Collar/(7f) Collar/(7g) Sub brake assembly (7h) Control plate assembly

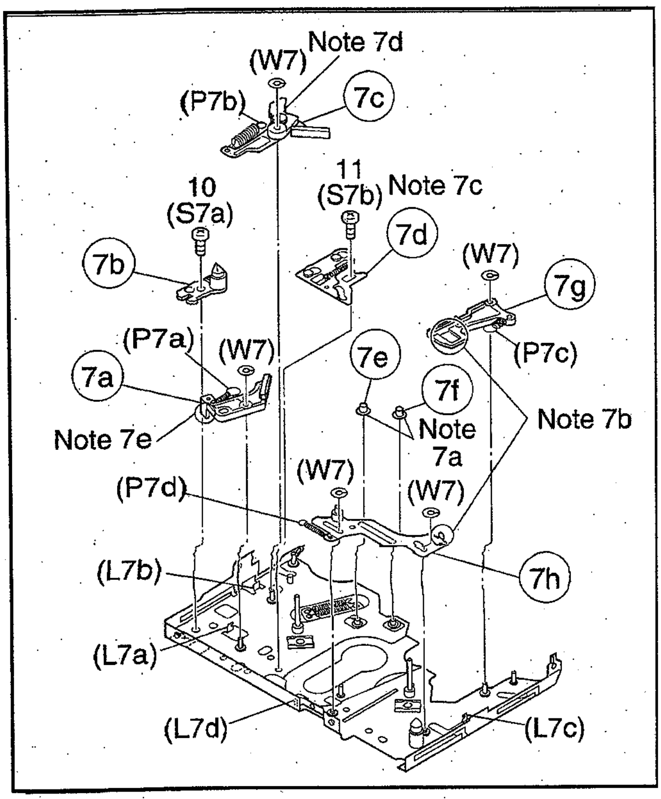


Fig. 7

8. (8a) Tension lever assembly/(8b) Slide lever assembly (8c) Brake control lever assembly

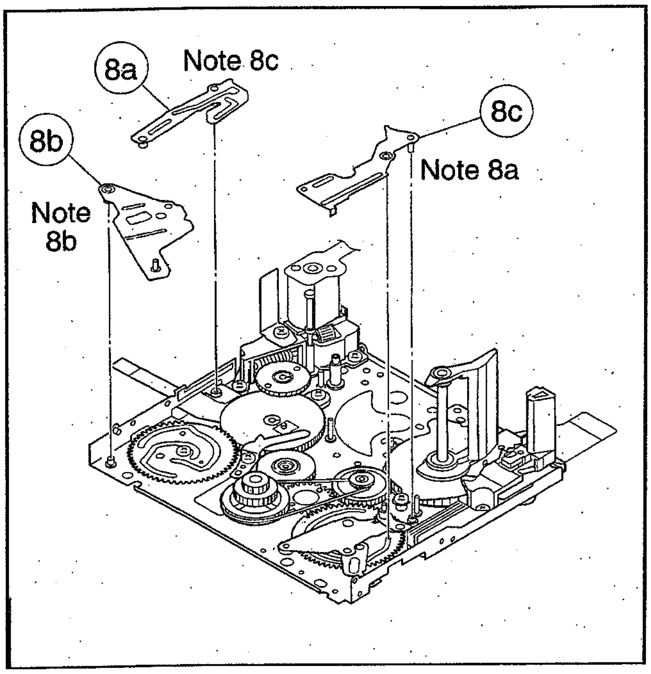
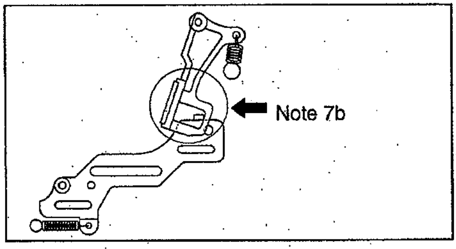


Fig. 8

Note 7a:
Don't remove these parts unreasonably. If they are removed for some reason, be very careful not to lose them.

Note 7b:
When reinstalling the sub brake assembly, set the control plate assembly so that its hook is set in the # part of the sub brake assembly.



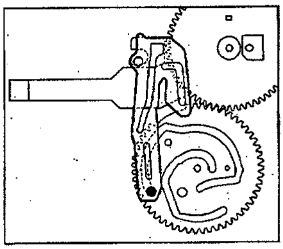
Note 7c:
Since the slide guide plate assembly controls the slide deck assembly so that it exactly slides the main deck assembly, it must exactly be assembled in the PLAY mode. Therefore, temporarily fix the slide guide plate assembly in this stage. For details of reassembling procedure, refer to "2.2.8 Assembling slide deck assembly and main deck assembly" on page 32.

Note 7d:
The pad arm assembly controls the tension level of the tension arm assembly. For adjustment of the tension arm assembly, refer to page 25.

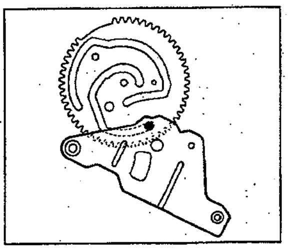
Note 7e:
When reinstalling the load brake assembly, slightly lift the slide deck assembly upwards because the lower part of the load brake assembly sticks out of the slide deck assembly.

Note 8a, 8b, 8c:
For refitting the respective parts, refer to the following figures

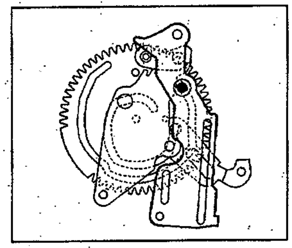
(8a) Tension lever assembly



(8b) Slide lever assembly



(8c) Brake control lever assembly



9.(9a) Loading guide/(9b) Timing belt
(9c) Center gear assembly/(9d) Motor bracket assembly
(9e) Worm wheel/(9f) Gear holder

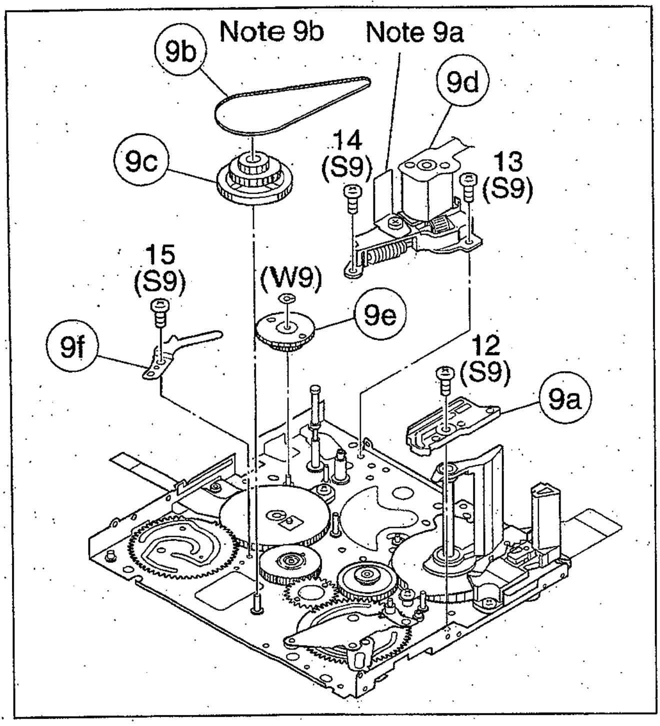

9b
Note 9b
Note 9a
9d
9c
14
(S9)
13
(S9)
15
(S9)
(W9)
9e
9f
12
(S9)
9a

Fig. 9

Note 9a:
Carefully handle the DEW sensor. (Don't touch the sensor surface in particular.)

Note 9b:
When engaging the timing belt, make sure that it securely engages with the gears of both the center gear assembly and reel drive pulley assembly.

10.(10a) Main cam gear/(10b) Brake control plate
(10c) Rotary encoder/(10d) Connect gear
(10e) Reel drive pulley assembly

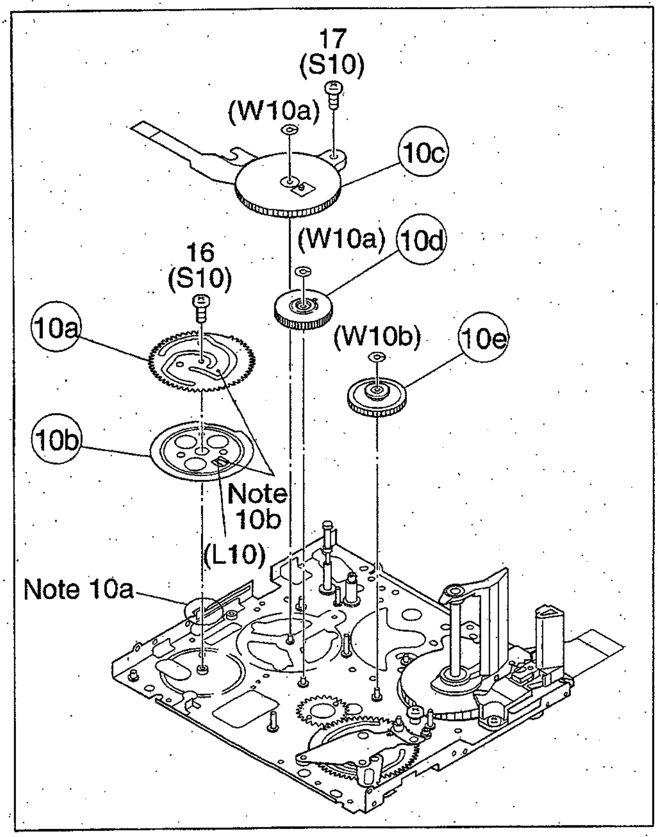
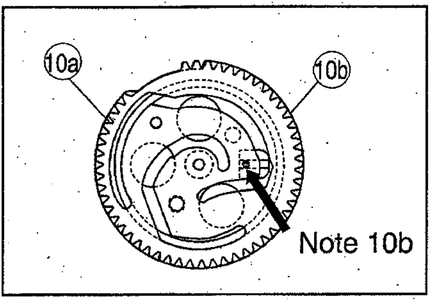

17
(S10)
(W10a)
10c
(W10a)
10d
16
(S10)
10a
(W10b)
10e
10b
Note
10b
(L10)
Note 10a

Fig. 10

Note 10a:
When removing/refitting parts, pay careful attention to the flexible board and so on not to damage them.

Note 10b:
When reinstalling the main cam gear and the brake control plate, first fit them together so that the protrusion on the brake control plate is set in the slot on the main cam gear as shown below, next install the two together to the main deck assembly.


10a
10b
Note 10b

11. (11a) Catcher (T) assembly/(11b) Capstan motor (11c) Charge arm assembly/(11d) Sub cam gear (11e) PWB holder

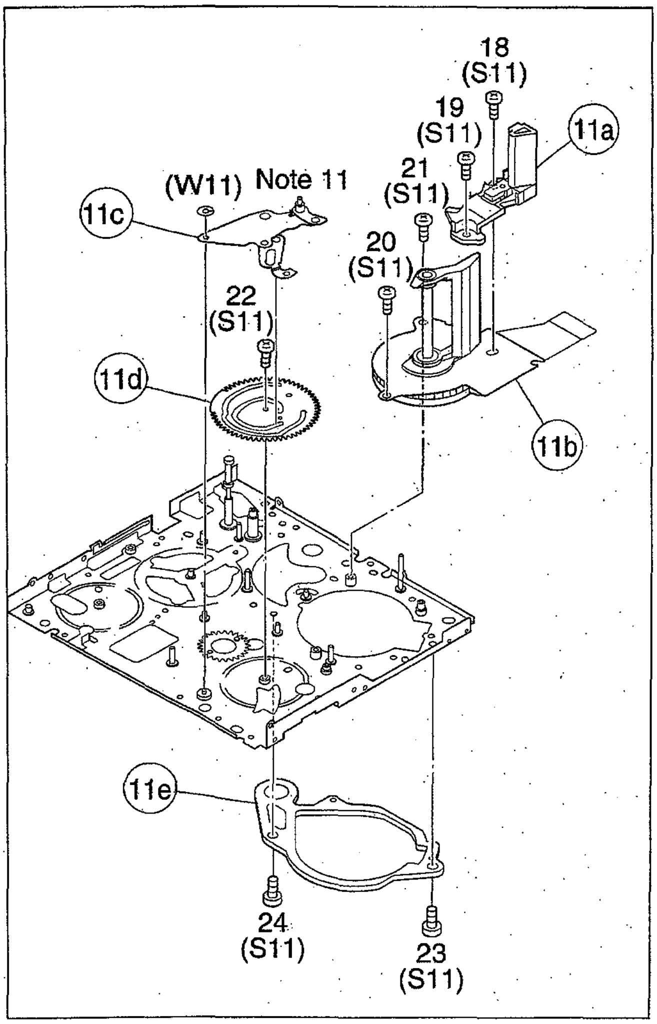
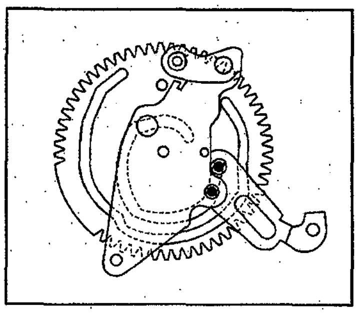
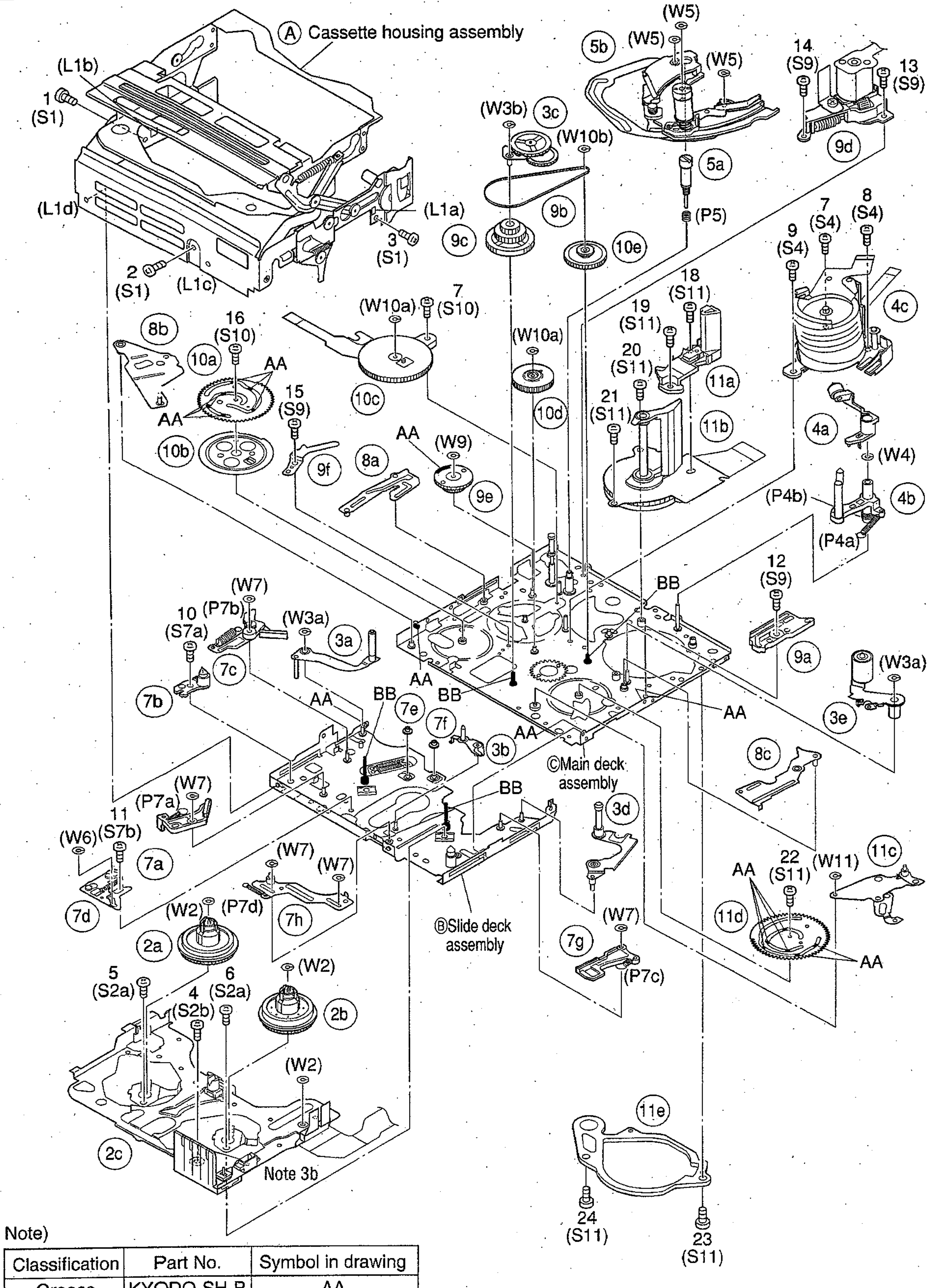

18
(S11)
19
(S11)
11a
21
(S11)
(W11) Note 11
11c
20
(S11)
22
(S11)
11d
11b
11e
24
(S11)
23
(S11)

Fig. 11

Note 11:
The following figure shows how to put the charge arm assembly and sub cam gear assembly together.



2.2.6 List of procedures for disassembly

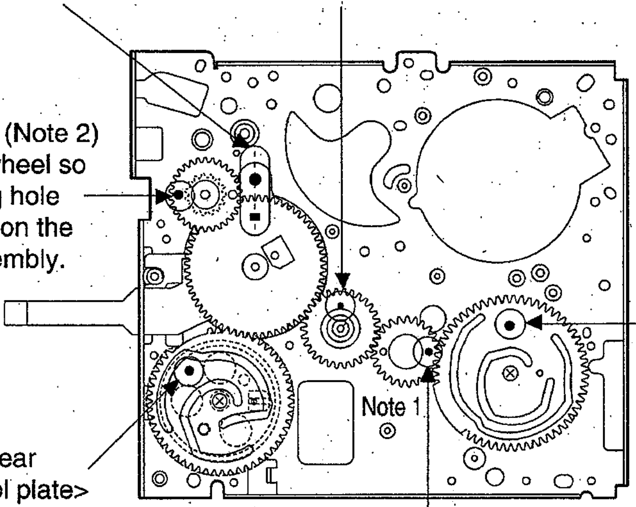

Ⓐ Cassette housing assembly
(L1b)
1
(S1)
(L1d)
(L1a)
3
(S1)
2
(S1)
(L1c)
(W5)
5b
(W5)
(W5)
14
(S9)
13
(S9)
9d
(W3b)
3c
(W10b)
5a
9b
(P5)
9c
10e
7
(S4)
8
(S4)
9
(S4)
4c
18
(S11)
19
(S11)
20
(S11)
11a
21
(S11)
11b
4a
(W4)
(P4b)
4b
(P4a)
7
(S10)
(W10a)
8b
16
(S10)
10a
AA
AA
15
(S9)
10c
(W10a)
10d
10b
9f
8a
AA
(W9)
9e
BB
12
(S9)
9a
(W3a)
3e
(W7)
10
(P7b)
(S7a)
(W3a)
3a
7c
7b
AA
AA
BB
7e
BB
7f
3b
AA
AA
©Main deck assembly
8c
BB
3d
(W7)
(P7a)
11
(S7b)
(W6)
7a
7d
(W7)
(W7)
7h
(W2)
(P7d)
2a
ⒷSlide deck assembly
(W7)
7g
(P7c)
AA
22
(S11)
(W11)
11c
11d
AA
5
(S2a)
6
(S2a)
4
(S2b)
(W2)
2b
(W2)
2c
Note 3b
11e
24
(S11)
23
(S11)

Note)

Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Oil	YTU94027	BB

Fig. 2-2-12

2.2.7 Checkup and adjustment of mechanism phase



<Connect gear> (Note 2)
Set the connect gear so that its locating hole meets the hole on the main deck assembly.

<Rotary encoder>
Set the "■" of the rotary part at the tapped hole as shown in the figure.

<Worm wheel> (Note 2)
Set the worm wheel so that its locating hole meets the hole on the main deck assembly.

<Sub cam gear>
Set the sub cam gear so that its locating hole meets the hole on the main deck assembly. This state represents that the mechanism is in the EJECT mode, which is the "mechanism assembly mode".

<Main cam gear /Brake control plate>
After fitting the main cam\ gear and brake control plat together,set them together so that their locating holes meet the hole on the main \ deck assembly.

<Connect gear 2> (Note 2)
Set the connect gear 2 so that its locating hole meets the hole on the main deck assembly.

Note 1:
Since the connect gear 2 is tightly fixed to the main deck by caulking, adjust its phase with the connect gear and sub cam gear.

Note 2:
The part that needs phase adjustment by the hole on the main deck assembly must exactly be set as the specified phase. There is a fear that some part is installed in a wrong phase because assembling of the mechanism is automated. If so, set every part in the correct phase whenever the mechanism is reassembled.

Fig. 2-2-13

2.2.8 Assembling slide deck assembly and main deck assembly

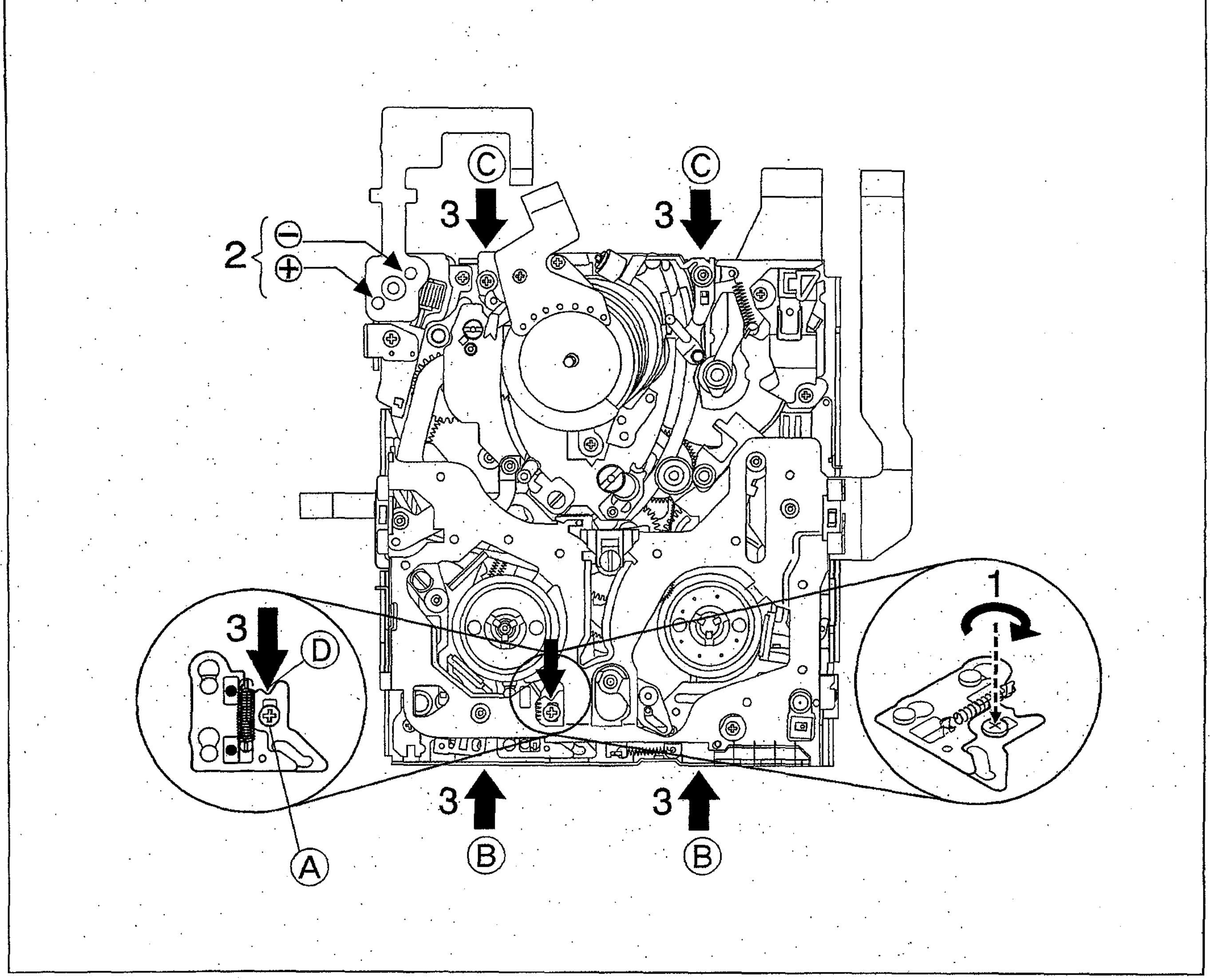


Fig. 2-2-14

Assembling procedure

1. Loosen the screw Ⓐ.
2. Set the mechanism in the PLAY mode. (Refer to page19)
3. Press the end face B of the slide deck assembly (reel disk side) and the end face Ⓒ of the main deck assembly (drum assembly side) with uniform force so that the two assemblies are tightly pressed to each other. Furthermore, press the part Ⓓ and tighten the screw Ⓐ.

Note : *Tightening torque for screw Ⓐ: 0.029 N·m (0.3 kgf·cm)*

2.2.9 Locating tension pole

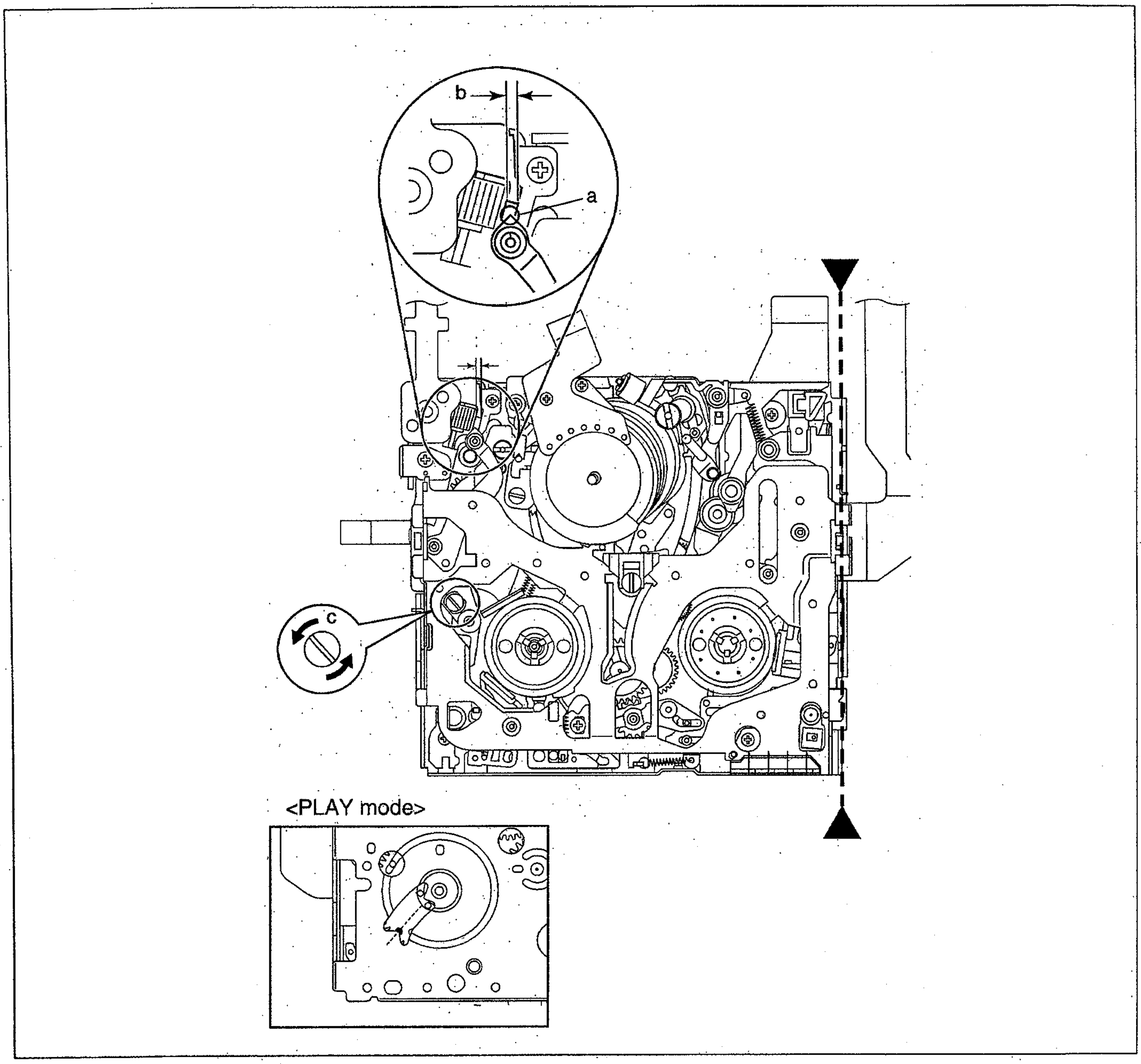


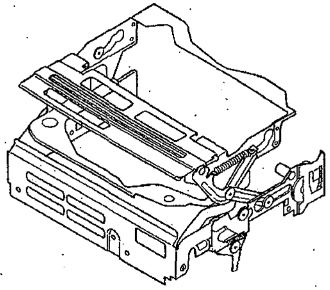
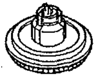
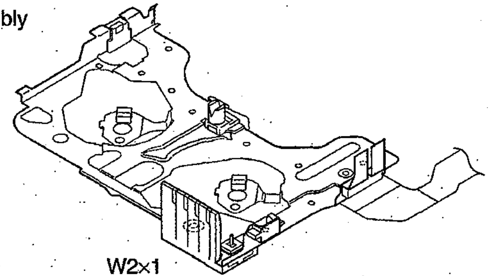
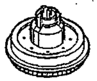
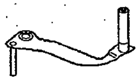
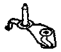
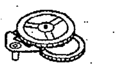
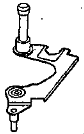
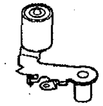
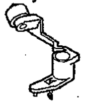
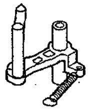
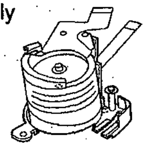
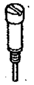
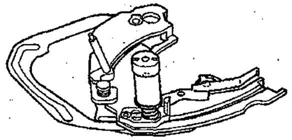
Fig. 2-2-15

Locating procedure

1. Enter the mechanism assembly into the PLAY mode. **(Refer to page 19)**
2. When the " ▶----◀ " part is positioned down, make sure that the part "a" of the tension arm assembly is located within the range of "b".
3. If the part "a" is out of the range, turn the pin "c" to adjust the position.

2.3 SERVICE NOTE

Use the following chart to manage mechanism parts that are removed for disassembling the mechanism.

1	Ⓐ Cassette housing assembly  S1×3				
2	(2a) Reel disk (SUP) assembly  W2×1	(2c) Reel cover assembly  S2a×2 S2b×1 W2×1			
	(2b) Reel disk (TU) assembly  W2×1				
3	(3a) Tension arm assembly  W3a×1	(3b) Release guide assembly 	(3c) Idler arm assembly  W3b×1	(3d) Guide arm assembly 	(3e) Pinch roller arm assembly  W3a×1
4	(4a) Cleaner arm assembly 	(4b) Slant pole arm assembly  W4×1 P4a×1 P4b×1	(4c) Drum assembly  S4×3		
5	(5a) Guide roller (S) assembly  P5×1	(5b) Rail assembly  W5×3			

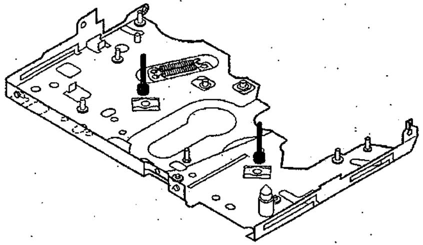
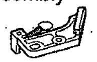
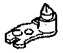
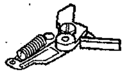
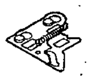
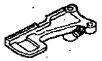
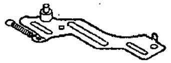
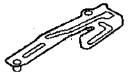
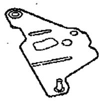
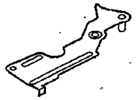
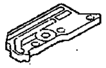
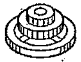
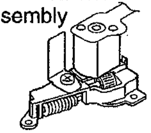
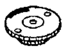
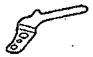
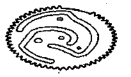
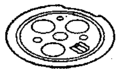
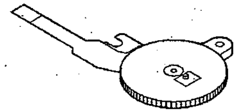
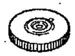
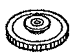
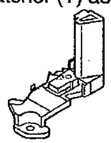
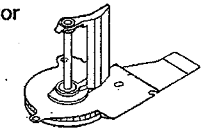
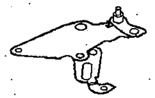
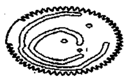
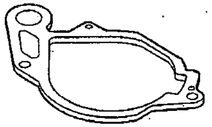
6	Ⓑ Slide deck assembly		W6×1
7	(7a) Loading brake assembly		W7×1 P7a×1
	(7b) Guide pin (SUPPLY)		S7a×1
	(7c) Pad arm assembly		W7×1 P7b×1
	(7d) Slide guide plate assembly		S7b×1 W7×1
	(7e) Collar		
	(7f) Collar		
	(7g) Sub brake assembly		W7×1 P7c×1
	(7h) Control plate assembly		W7×2 P7d×1
8	(8a) Tension lever assembly		
	(8b) Slide lever assembly		
	(8c) Brake control lever assembly		
9	(9a) Loading guide		S9×1
	(9b) Timing belt		
	(9c) Center gear assembly		
	(9d) Motor bracket assembly		S9×2
	(9e) Worm wheel		W9×1
	(9f) Gear holder		S9×1
10	(10a) Main cam gear		S10×1
	(10b) Brake control plate		
	(10c) Rotary encoder		S10×1 W10a×1
	(10d) Connect gear		W10a×1
	(10e) Reel drive pulley assembly		W10b×1
11	(11a) Catcher (T) assembly		S11×2
	(11b) Capstan motor		S11×2
	(11c) Charge arm assembly		W11×1
	(11d) Sub cam gear		S11×1
	(11e) PWB holder		S11×2

Table 2-3-1

SECTION 3
ELECTRICAL ADJUSTMENT

3.1 PREPARATION BEFORE ADJUSTMENT

3.1.1 Precautions

Both the deck and camera sections of this model are designed to be adjustment-free. However, if the following part is replaced, the set must be brought into a service center having a complete set of service equipment, because it needs special adjustment with a personal computer in such a case.

- OP block
- E^{2}PROM (IC1003 on MAIN board)
- MONITOR
- E^{2}PROM (IC7210 on MONITOR board)

When there is some trouble with the electric circuit, it is required to detect the part of the failure with specified test instruments first and then to proceed to adjustment, repair or replacement. Matters that require attention:

(1) When checking at a chip test point, be sure to use an IC clip or the like not to apply it any stress. When replacing a chip part (IC in particular), completely remove solder from it and its periphery before replacement (to avoid exfoliation of the pattern).

(2) Carefully connect/disconnect a connector because it is apt to get damaged.

3.1.2 Required test equipment

(1) Personal computer (operated on Windows OS)
(2) Color video monitor
(3) Oscilloscope (dual-trace type, observable 100 MHz or higher frequency)
  * It is recommended to use one observable 300 MHz or higher frequency.
(4) Digital voltmeter
(5) DC power supply
(6) Frequency counter (with threshold level adjustment)

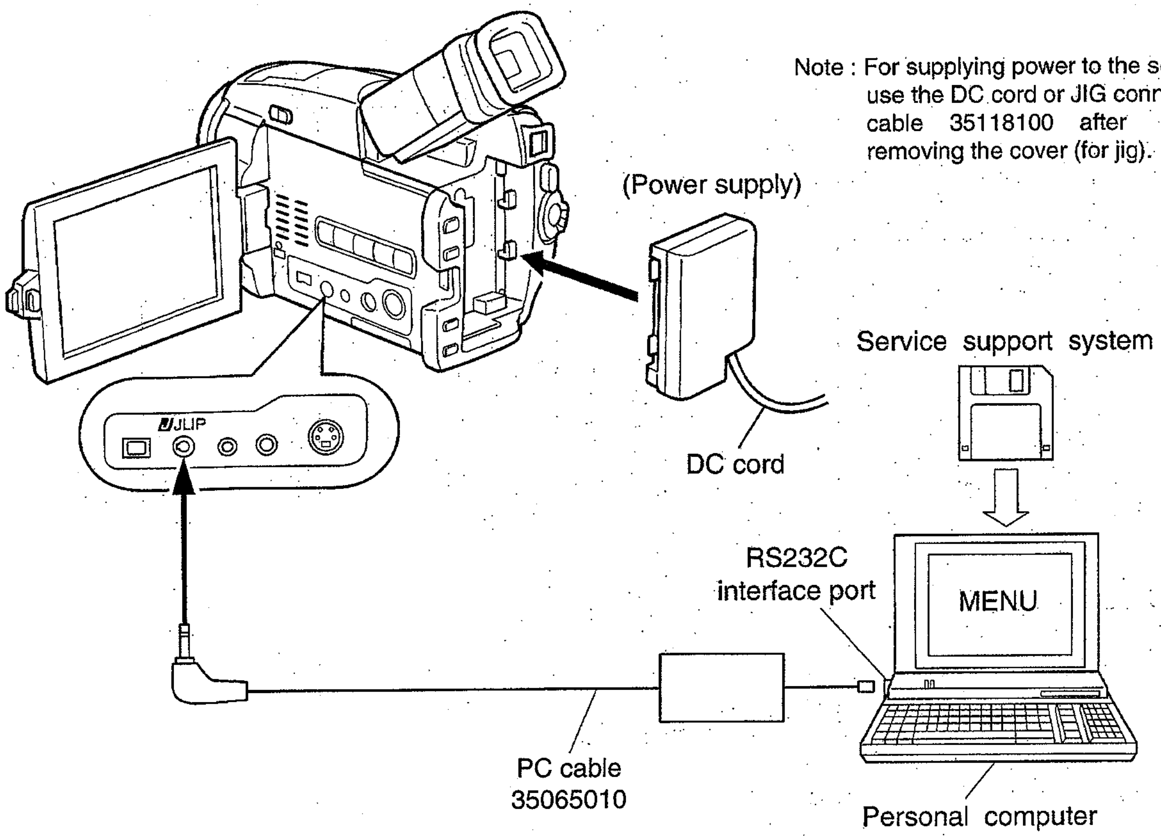
3.1.3 Jigs necessary for electrical adjustment

For jigs necessary for electrical adjustment, refer to pages 2 and 3 of the Section 1.

3.1.4 Setup

Note: *For adjustment with a personal computer, basically use the JLIP terminal of the set for connecting the personal computer.*

1. For connecting personal computer directly to the set. (For checking the set status before disassembling.)



Note : For supplying power to the set, use the DC cord or JIG conn. cable 35118100 after removing the cover (for jig).

Fig. 3-1-1 Setup for electrical adjustment with personal computer (I)

2. Setup with patch cords and jig connector cables

NOTE:

Fig. 3-1-2 shows an example of expansion setup that facilitates inspection of major boards because main components are connected by means of patch cords and jig cables. For proceeding to electrical adjustment in such the setup, disassemble the set at a certain level required for the current adjustment objectives referring to the section 1 "DISASSEMBLY" and properly set up the expanded set and test instruments.

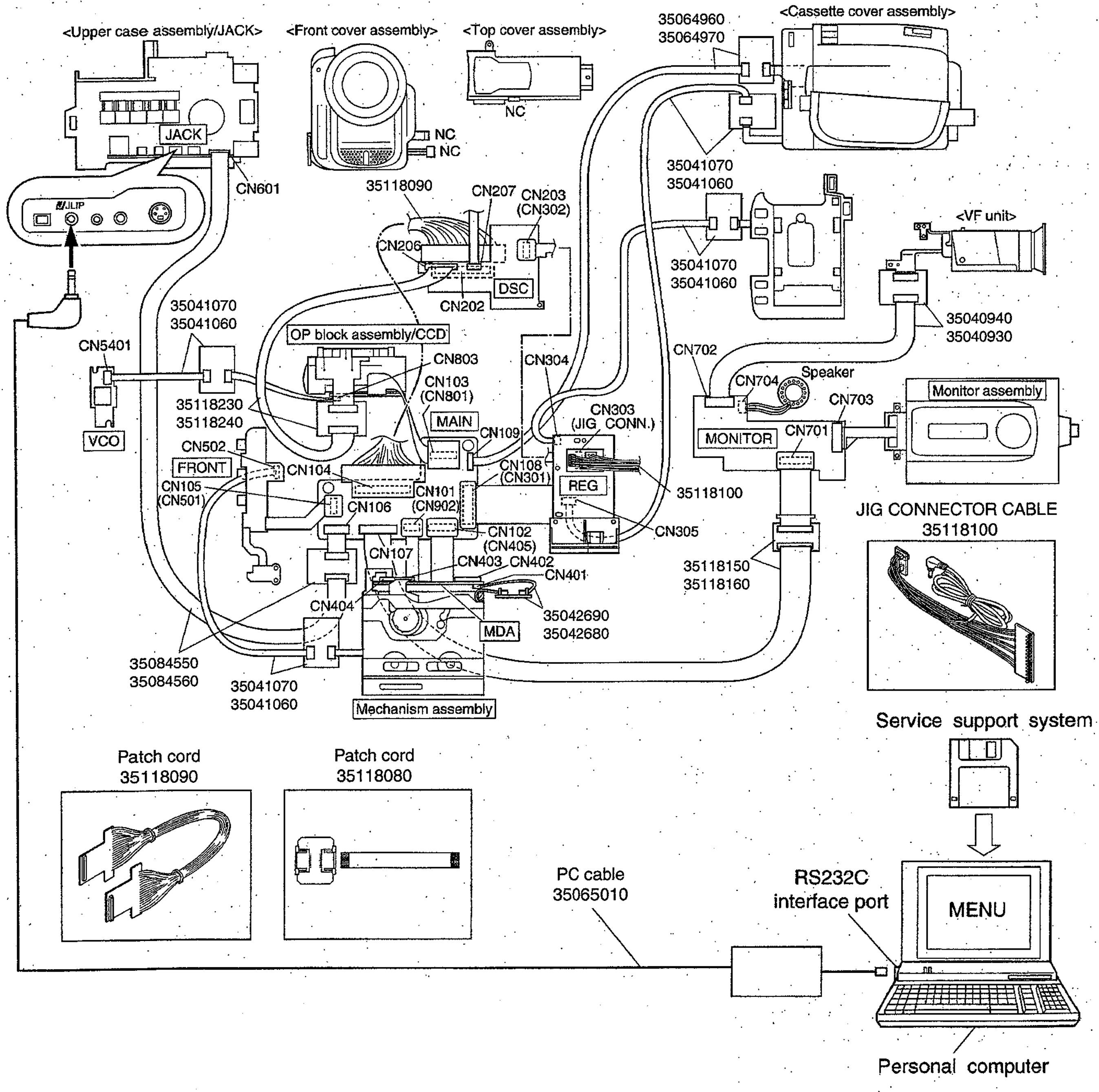

<Upper case assembly/JACK>
JACK
J/LIP
CN601
<Front cover assembly>
NC
NC
<Top cover assembly>
NC
35064960
35064970
<Cassette cover assembly>
35041070
35041060
35118090
CN207
CN203
(CN302)
CN206
CN202
DSC
35041070
35041060
<VF unit>
35041070
35041060
CN5401
VCO
OP block assembly/CCD
CN803
CN103
(CN801)
MAIN
CN109
CN304
CN303
(JIG CONN.)
REG
35118100
CN305
35118230
35118240
CN502
FRONT
CN105
(CN501)
CN104
CN101
(CN902)
CN106
CN108
(CN301)
CN102
(CN405)
CN107
CN403
CN402
CN401
CN404
35042690
35042680
MDA
35084550
35084560
35041070
35041060
Mechanism assembly
35040940
35040930
CN702
CN704
Speaker
CN703
Monitor assembly
MONITOR
CN701
35118150
35118160
JIG CONNECTOR CABLE
35118100
Service support system
Patch cord
35118090
Patch cord
35118080
PC cable
35065010
RS232C
interface port
MENU
Personal computer

Fig. 3-1-2 Setup for electrical adjustment with personal computer (II)

3.2 MONITOR ADJUSTMENT

Note: *Unless otherwise specified, all measurement points and adjustment parts are located on MONITOR board.*

3.2.1 PLL (MONI)

Subject	• Camera picture • Gray scale
Mode	• EE
Equipment	• Oscilloscope
Measurement point	• IC7300 pin 24 (RPD)
Adjustment part	• R7338 (PLL MONI)
Specification	• A = B

1) Observe waveform at pin 24 of the IC7300.
2) For the waveform shown in the waveform chart (Fig. 3-2-2), equalize the width of A and B with each other by adjusting R7338.

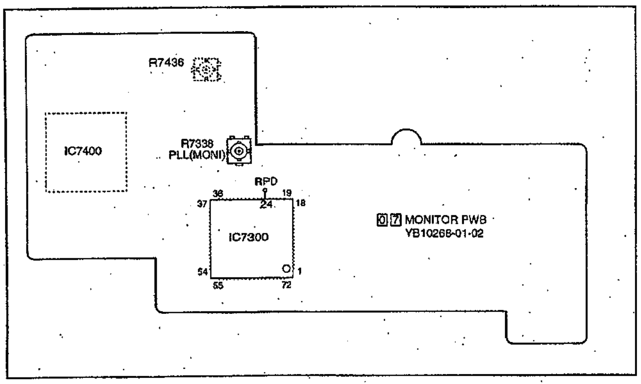

R7436
IC7400
R7338
PLL(MONI)
RPD
36
19
24
37
18
IC7300
54
1
55
72
MONITOR PWB
YB10268-01-02

Fig. 3-2-1 MONITOR board (FOIL SIDE)

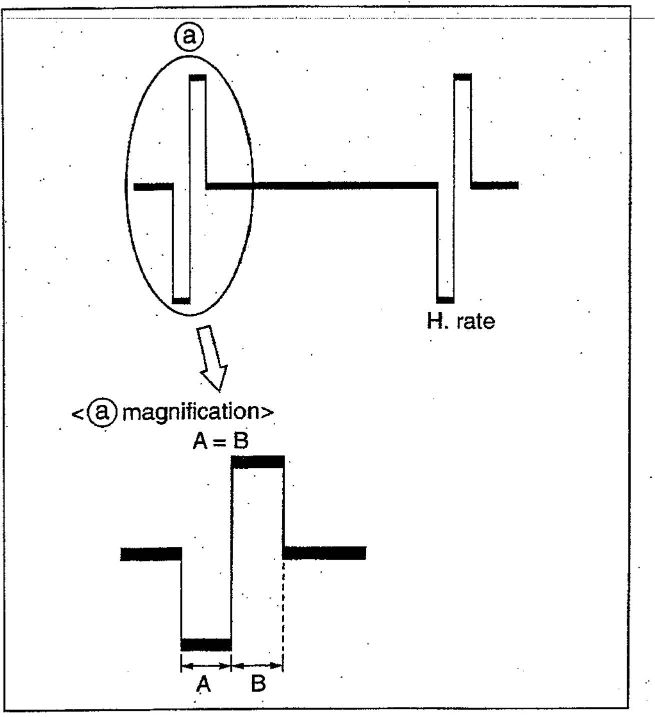

ⓐ
H. rate
<ⓐ magnification>
A = B
A
B

Fig. 3-2-2 PLL (MONI)

3.3 ELECTRONIC VIEWFINDER (E. VF) ADJUSTMENT

Note: *Unless otherwise specified, all measurement points and adjustment parts are located on MONITOR board.*

3.3.1 PLL (VF)

Subject	• Camera picture • Gray scale
Mode	• EE
Equipment	• Oscilloscope
Measurement point	• IC7400 pin 24 (RPD)
Adjustment part	• R7436 (PLL VF)
Specification	• A = B

1) Observe waveform at pin 24 of the IC7400.
2) For the waveform shown in the waveform chart (Fig. 3-3-2), equalize the width of A and B with each other by adjusting R7436.

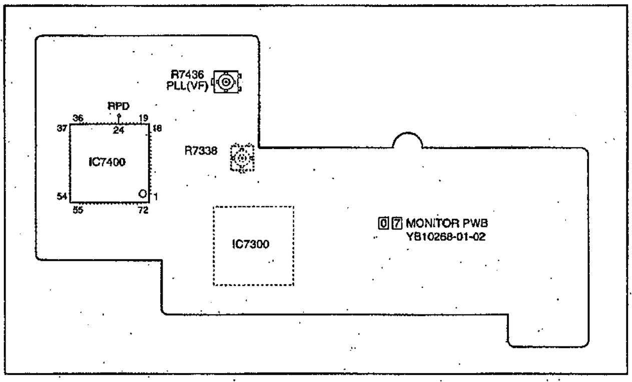

R7436
PLL(VF)
RPD
36
19
24
37
18
IC7400
R7338
54
1
55
72
IC7300
MONITOR PWB
YB10268-01-02

Fig. 3-3-1 MONITOR board (FOIL SIDE)

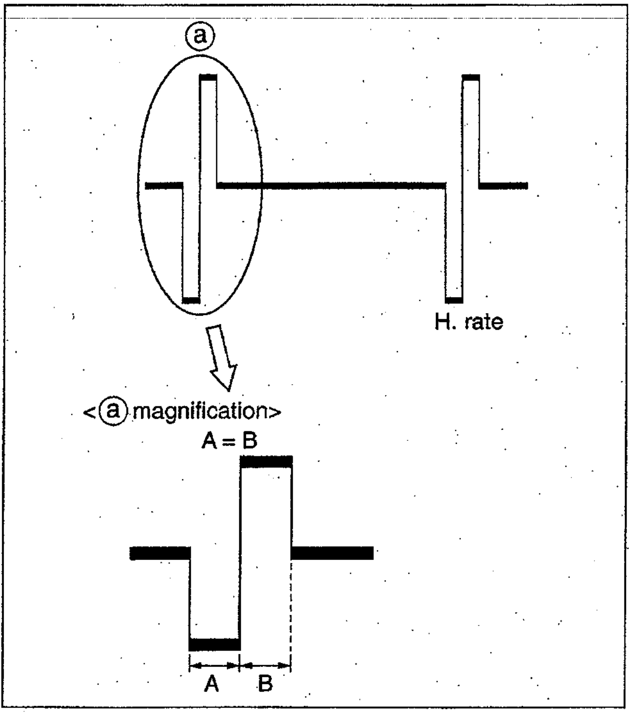

ⓐ
H. rate
<ⓐ magnification>
A = B
A
B

Fig. 3-3-2 PLL (VF)

3.4 MPL ADJUSTMENT

Notes:
- *This adjustment minimizes vertical line noise that appears at a low illuminance.*
- *Unless otherwise specified, all measurement points and adjustment parts are located on MPL board.*
- *Set the switches as shown below unless otherwise specified on the relevant adjustment chart. The switches that are not listed below can be set as desired.*

GAIN UP	AGC (ON)
SHUTTER SPPED	1/50

3.4.1 MPL

Subject	• Camera picture
Mode	• EE
Equipment	• –
Measurement point	• TV monitor
Adjustment part	• R5407 (MPL)
Specification	• Minimum level

1) While looking through the TV monitor, adjust the R5407 so that the vertical line noise is minimized.

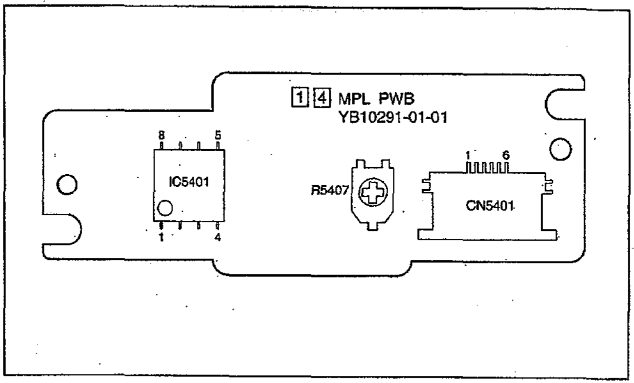

1 4 MPL PWB
YB10291-01-01
8
5
IC5401
1
4
R5407
1
6
CN5401

Fig. 3-4-1 MPL board (COMPONENT SIDE)

3.5 FUSE LOCATION

3.5.1 REG PWB (FOIL SIDE)

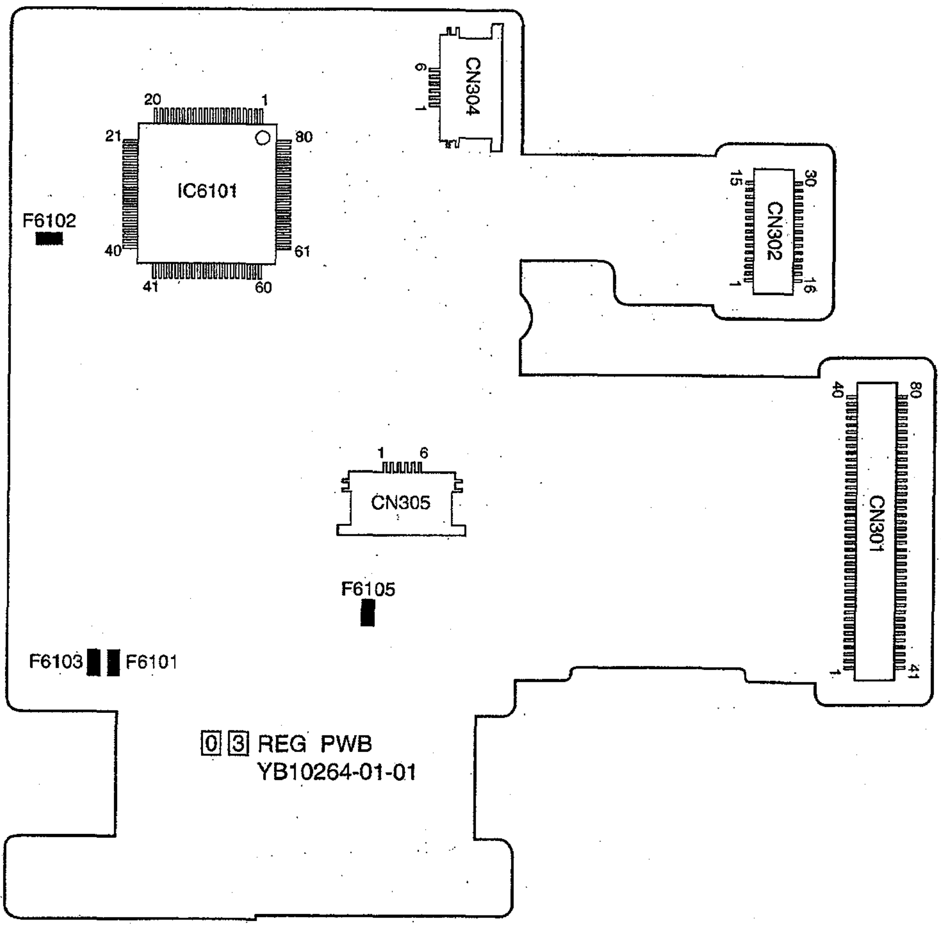

CN304
6
1
20
1
21
80
IC6101
40
61
41
60
F6102
CN302
15
30
1
16
CN301
40
80
1
41
1
6
CN305
F6105
F6103
F6101
0 3 REG PWB
YB10264-01-01

Fig. 3-5-1 Fuse location for REG board assembly

3.5.2 MONITOR PWB (FOIL SIDE)

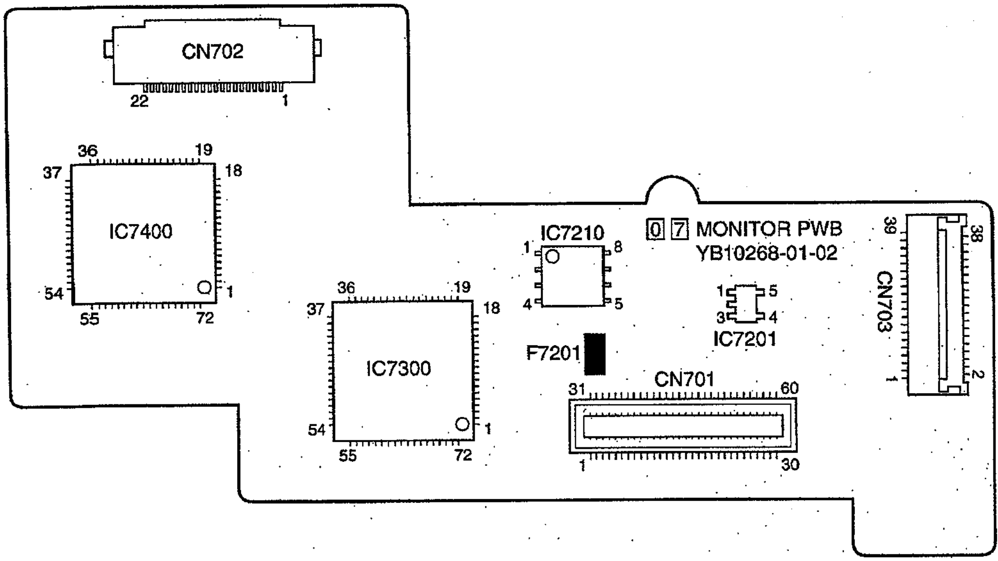

CN702
22
1
IC7400
36
19
37
18
54
1
55
72
IC7300
36
19
37
18
54
1
55
72
IC7210
1
8
4
5
F7201
0 7 MONITOR PWB
YB10268-01-02
IC7201
1
5
3
4
CN701
31
60
1
30
CN703
39
38
1
2

Fig. 3-5-2 Fuse location for MONITOR board assembly

3.5.3 MONITOR PWB (COMPONENT SIDE)

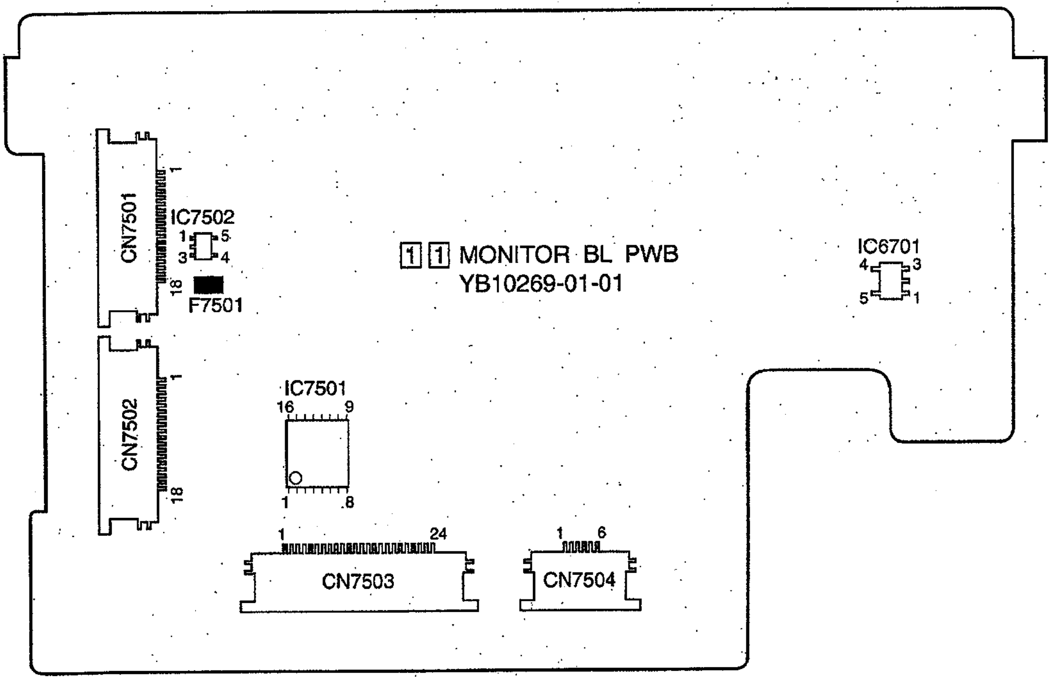

CN7501
1
18
IC7502
1
5
3
4
F7501
1 1 MONITOR BL PWB
YB10269-01-01
IC6701
4
3
5
1
CN7502
1
18
IC7501
16
9
1
8
CN7503
1
24
CN7504
1
6

Fig. 3-5-3 Fuse location MONITOR BL board assembly

SECTION 4
CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions
The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

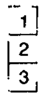
1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ (1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in μF, (P: PF).
3) All inductance values are in μH, (m: mH).
4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

2. Indications of control voltage

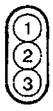
AUX : Active at high

$\overline{\text{AUX}}$ or AUX(L) : Active at low

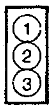
3. Interpreting Connector indications



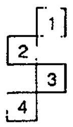
Removable connector



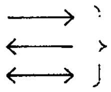
Wire soldered directly on board



Non-removable Board connector



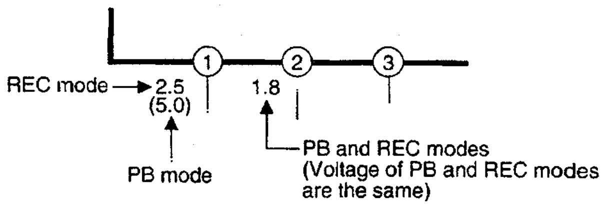
Board to Board



Connected pattern on board
The arrows indicate signal path

4. Voltage measurement

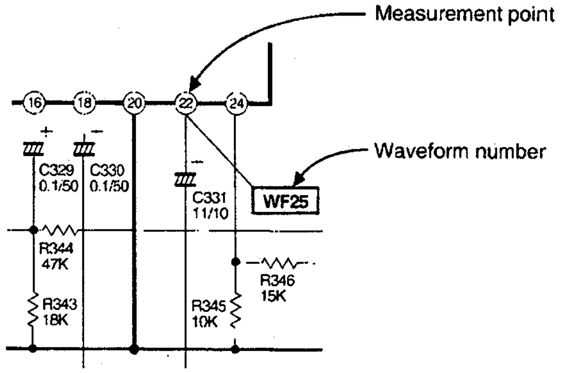
1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
   — : Unmeasurable or unnecessary to measure
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, Normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test charts in the E-E mode
4) Indication on schematic diagram
   Voltage Indications for REC and PB mode on the schematic diagram are as shown below.


REC mode
2.5
(5.0)
1.8
1
2
3
PB mode
PB and REC modes
(Voltage of PB and REC modes are the same)

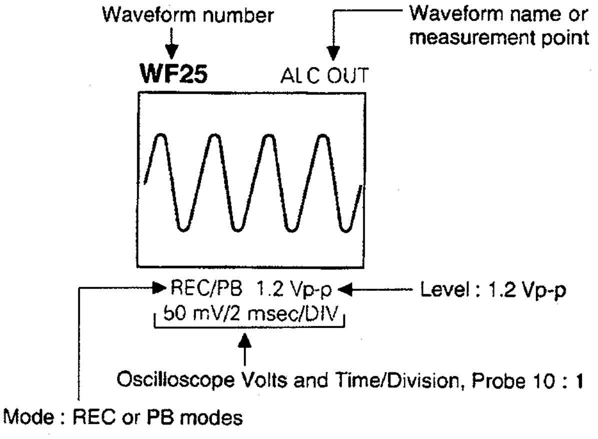
Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

5. Waveform measurement

1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test chatrs in the E-E mode
4) Indication on schematic diagram
   Waveform indications on the schematic diagram are as shown below.


Measurement point
16
18
20
22
24
C329
0.1/50
C330
0.1/50
C331
11/10
WF25
Waveform number
R344
47K
R343
18K
R345
10K
R346
15K

5) Waveform indications


Waveform number
Waveform name or measurement point
WF25
ALC OUT
REC/PB 1.2 Vp-p
Level : 1.2 Vp-p
50 mV/2 msec/DIV
Oscilloscope Volts and Time/Division, Probe 10 : 1
Mode : REC or PB modes

6. Signal path Symbols

The arrows indicate the signal path as follows.

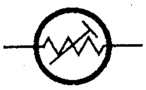
⇨	Playback signal path
▭▶	Playback and recording signal path
➡	Recording signal path (including E-E signal path)
⇨>	Capstan servo path
➡▶	Drum servo path

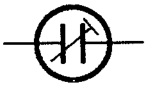
(Example)

⇨ R-Y	Playback R-Y signal path
➡ Y	Recording Y signal path

7. Indication of the parts for adjustments

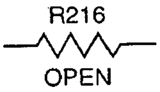
The parts for the adjustments are surrounded with the circle as shown below.





8. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.



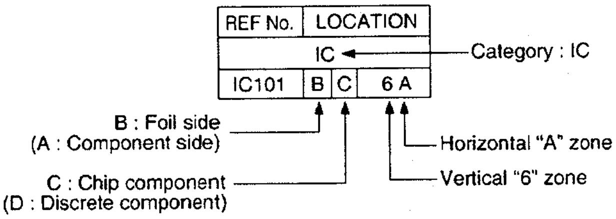
CIRCUIT BOARD NOTES

1. Foil and Component sides

1) Foil side (B side) :
   Parts on the foil side seen from foil face (pattern face) are indicated.
2) Component side (A side) :
   Parts on the component side seen from component face (parts face) indicated.

2. Parts location guides

Parts location are indicated by guide scale on the circuit board.

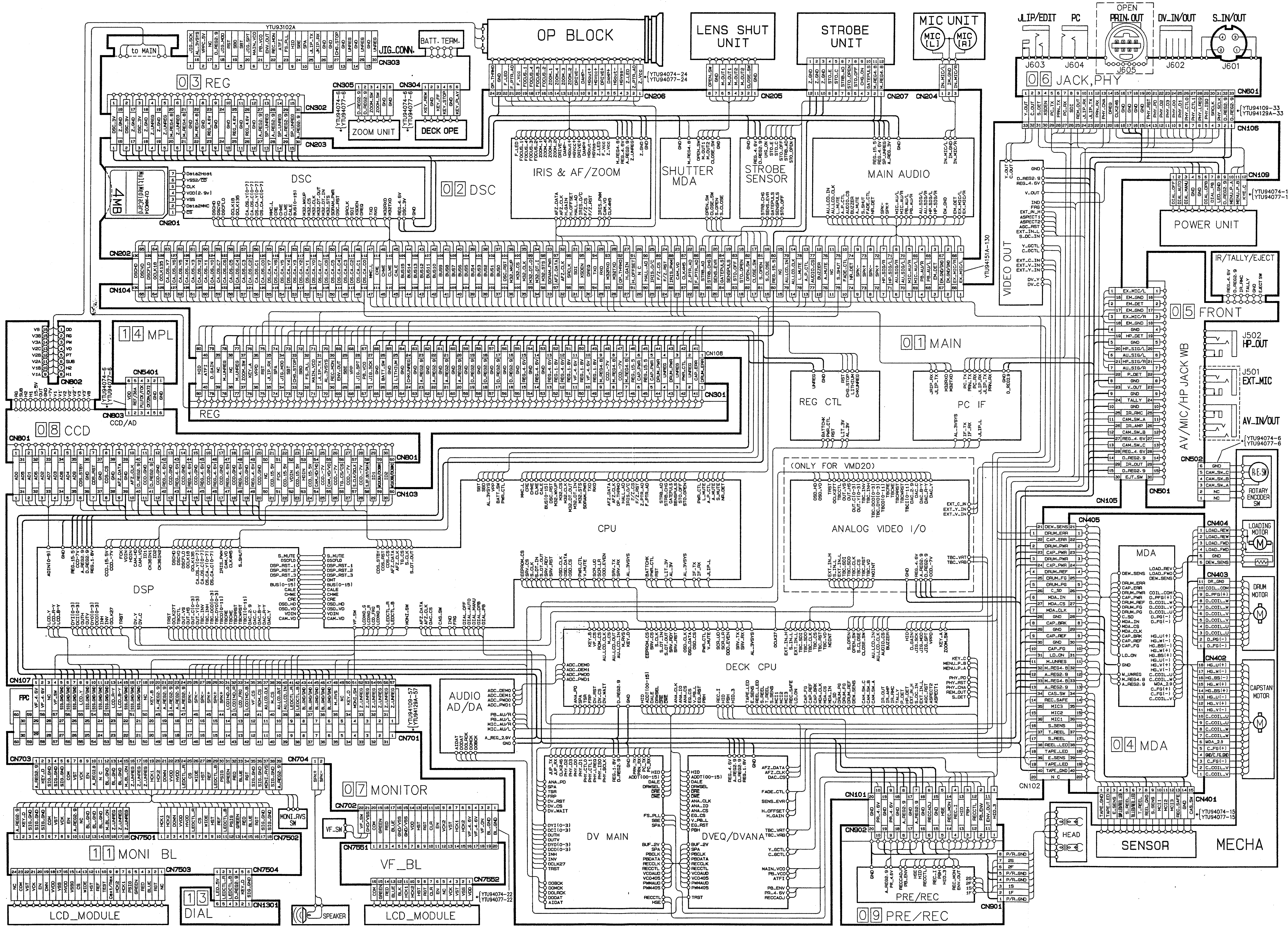

REF No.
LOCATION
IC
Category : IC
IC101
B
C
6 A
B : Foil side
(A : Component side)
C : Chip component
(D : Discrete component)
Horizontal "A" zone
Vertical "6" zone

Note:

For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

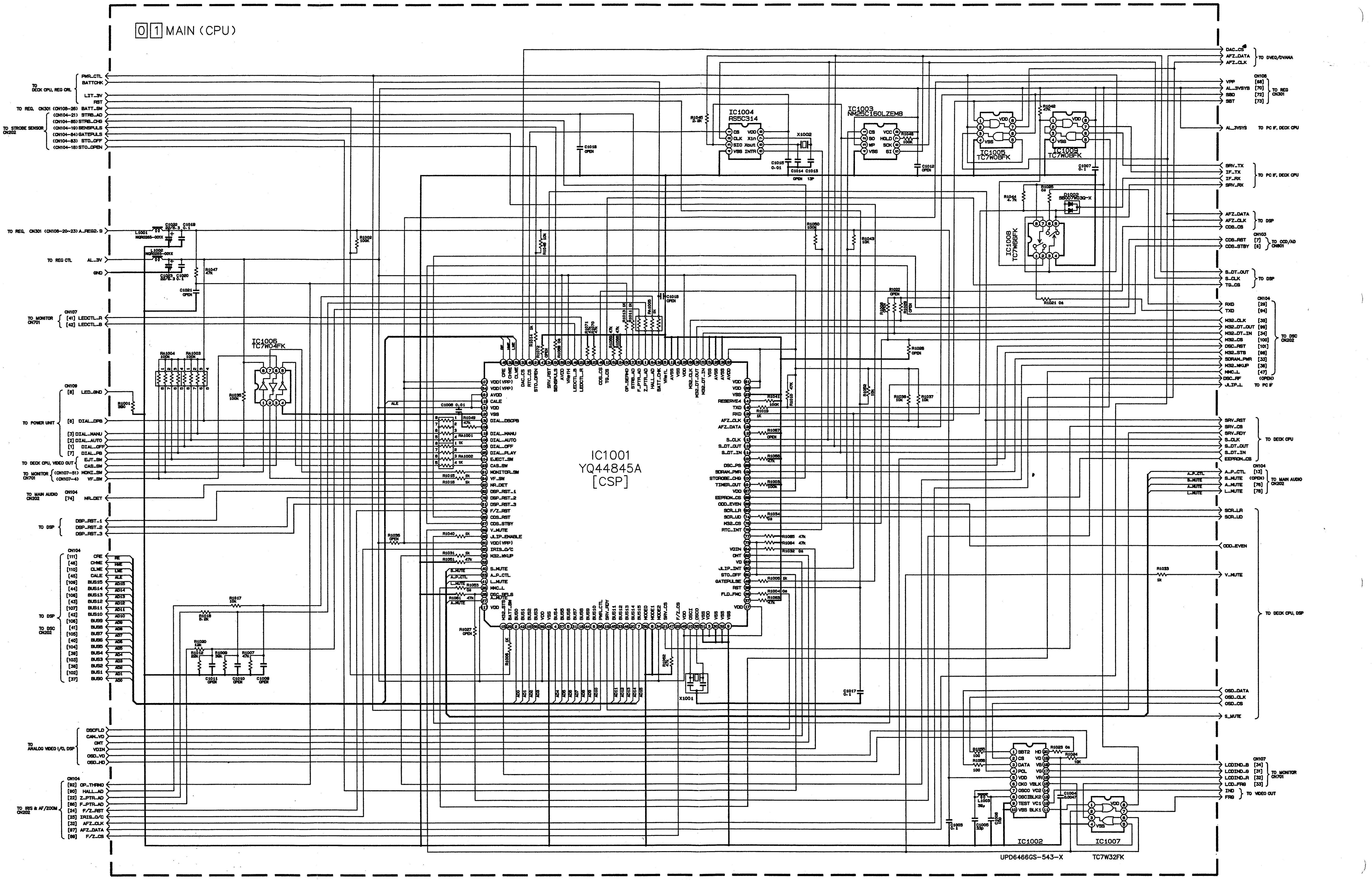
4.1 BOARD INTERCONNECTIONS

NOTE) * : The number of patch cords are indicated by interconnected.



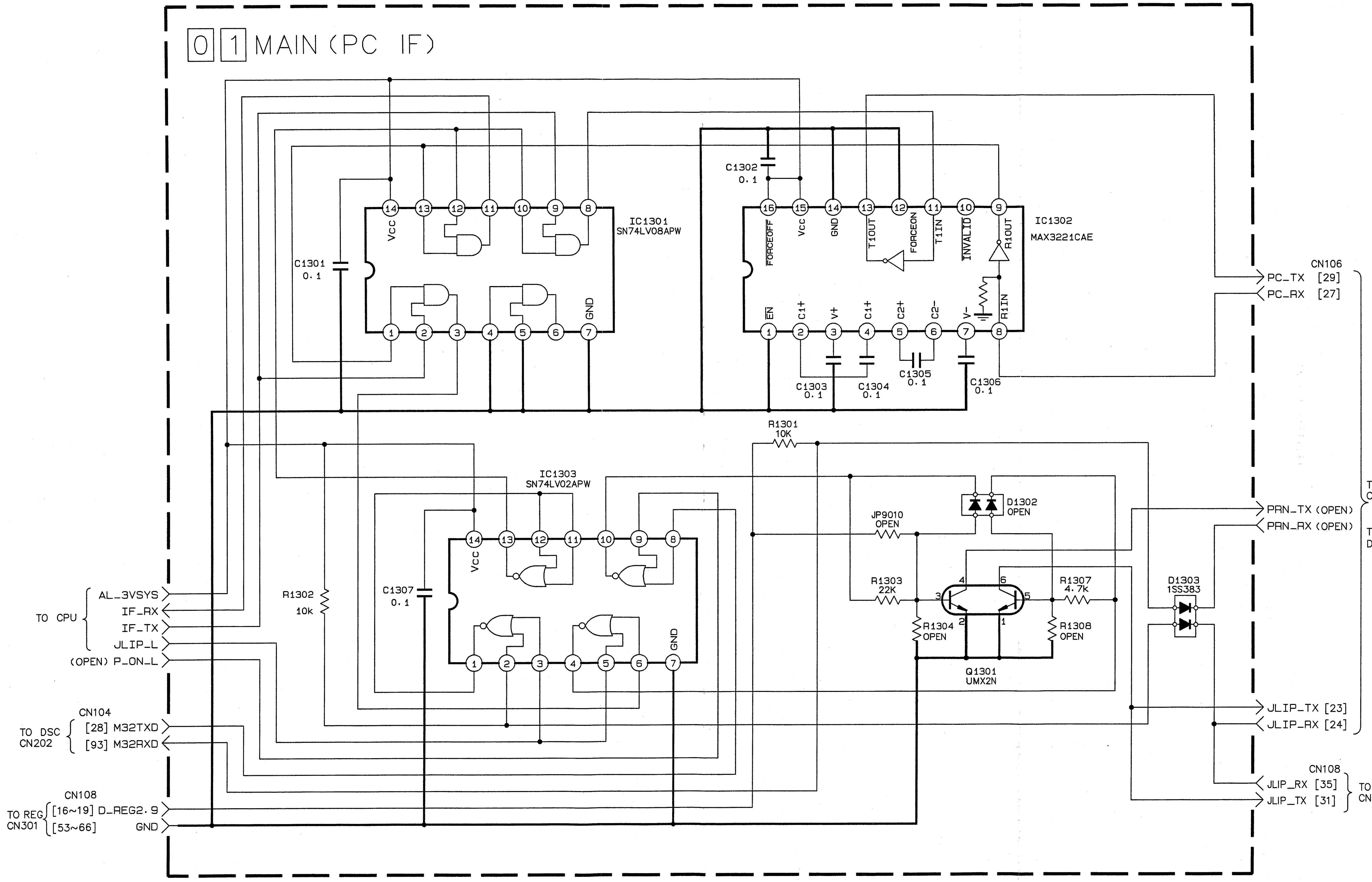
OP BLOCK
LENS SHUT UNIT
STROBE UNIT
MIC UNIT
MIC (L)
MIC (R)
J.LIP/EDIT
PC
OPEN
PRIN. OUT
DV_IN/OUT
S_IN/OUT
J603
J604
J605
J602
J601
06 JACK,PHY
CN601
YTU93102A
to MAIN
JIG_CONN.
BATT. TERM.
CN303
03 REG
CN305
CN304
CN302
CN203
ZOOM UNIT
DECK OPE
CN206
CN205
CN207
CN204
CN106
CN109
IRIS & AF/ZOOM
SHUTTER MDA
STROBE SENSOR
MAIN AUDIO
POWER UNIT
4MB
DSC
02 DSC
CN201
CN202
CN104
VIDEO OUT
IR/TALLY/EJECT
05 FRONT
14 MPL
CN802
CN5401
CN803
CCD/AD
01 MAIN
CN108
CN301
REG
REG CTL
PC IF
J502 HP_OUT
J501 EXT_MIC
AV_IN/OUT
AV/MIC/HP JACK WB
08 CCD
CN801
CN103
(ONLY FOR VMD20)
ANALOG VIDEO I/O
CPU
CN502
CN501
CN105
ROTARY ENCODER SW
DSP
CN405
CN404
LOADING MOTOR
MDA
CN403
DRUM MOTOR
DECK CPU
CN402
CAPSTAN MOTOR
04 MDA
CN107
FPC
AUDIO AD/DA
CN701
CN703
CN704
07 MONITOR
CN702
VF_SW
MONI_RVS SW
CN7501
CN7502
11 MONI BL
CN7503
CN7504
CN7551
VF_BL
CN7552
DV MAIN
DVEQ/DVANA
CN101
CN102
CN902
HEAD
SENSOR
MECHA
CN401
PRE/REC
CN901
09 PRE/REC
LCD_MODULE
13 DIAL
CN1301
SPEAKER
LCD_MODULE

4.2 CPU SCHEMATIC DIAGRAM

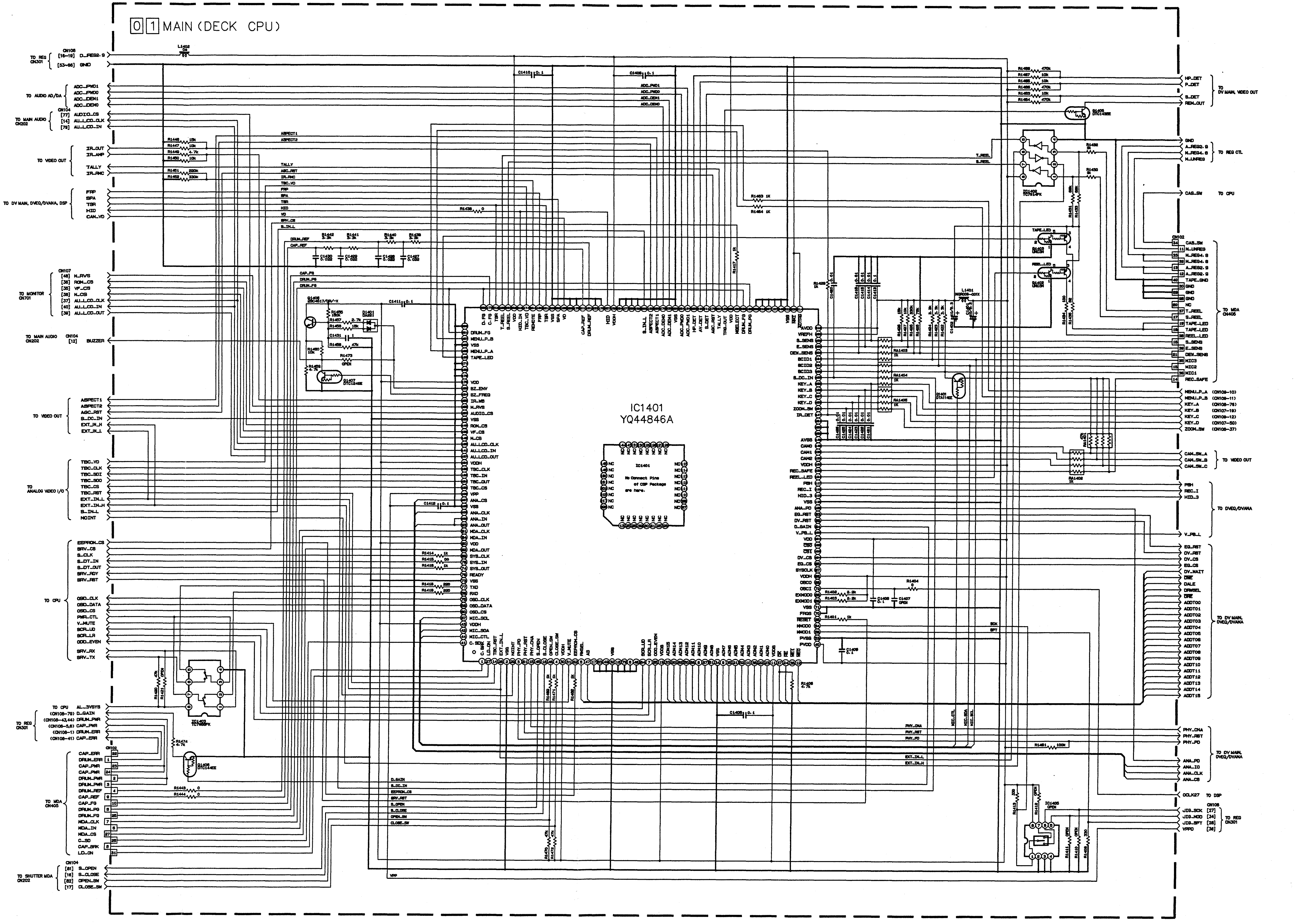


0 1 MAIN (CPU)
IC1001
YQ44845A
[CSP]
IC1004
RS5C314
IC1003
NM25C160LZEM8
IC1005
TC7W08FK
IC1009
TC7W08FK
IC1006
TC7W04FK
IC1008
TC7W66FK
IC1002
UPD6466GS-543-X
IC1007
TC7W32FK
X1001
X1002
D1002
SB007W03Q-X
TO DVEO/DVANA
TO REG CN301
TO PC IF, DECK CPU
TO DSP
TO CCD/AD CN801
TO DSC CN202
TO DECK CPU
TO MAIN AUDIO CN202
TO DECK CPU, DSP
TO MONITOR CN701
TO VIDEO OUT
TO DECK CPU, REG CRL
TO STROBE SENSOR CN202
TO REG CTL
TO MONITOR CN701
TO POWER UNIT
TO DECK CPU, VIDEO OUT
TO MAIN AUDIO CN202
TO DSP
TO DSC CN202
TO ANALOG VIDEO I/O, DSP
TO IRIS & AF/ZOOM CN202

4.3 PC IF SCHEMATIC DIAGRAM

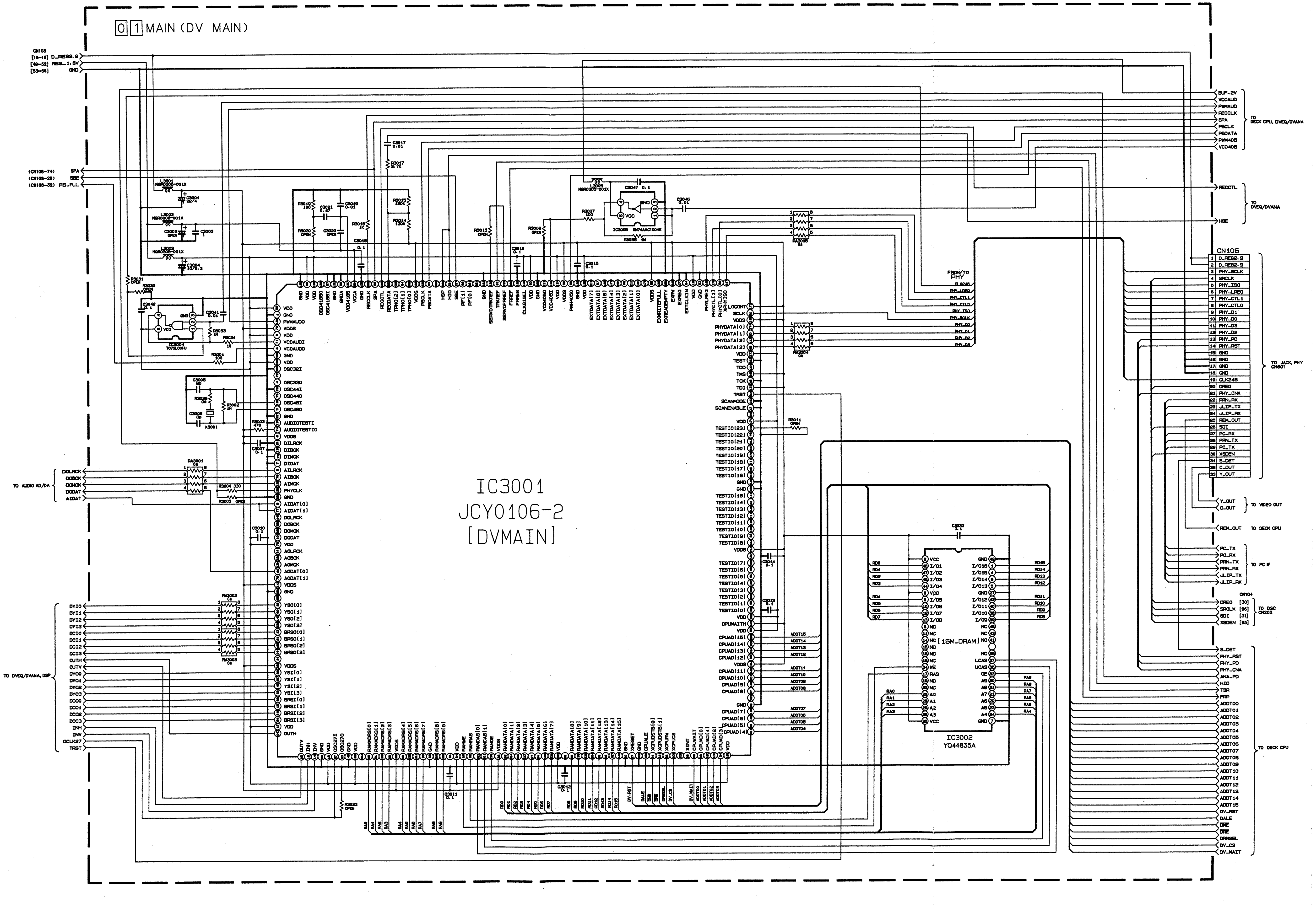

0 1 MAIN (PC IF)
IC1301
SN74LV08APW
Vcc
GND
C1301
0.1
IC1302
MAX3221CAE
C1302
0.1
FORCEOFF
Vcc
GND
T1OUT
FORCEON
T1IN
INVALID
R1OUT
EN
C1+
V+
C1+
C2+
C2-
V-
R1IN
C1303
0.1
C1304
0.1
C1305
0.1
C1306
0.1
R1301
10K
IC1303
SN74LV02APW
Vcc
GND
R1302
10k
C1307
0.1
JP9010
OPEN
D1302
OPEN
R1303
22K
R1304
OPEN
R1307
4.7k
R1308
OPEN
Q1301
UMX2N
D1303
1SS383
TO CPU
AL_3VSYS
IF_RX
IF_TX
JLIP_L
(OPEN) P_ON_L
CN104
TO DSC
CN202
[28] M32TXD
[93] M32RXD
CN108
TO REG
CN301
[16~19] D_REG2.9
[53~66] GND
CN106
PC_TX [29]
PC_RX [27]
TO JACK
CN601
PRN_TX (OPEN)
PRN_RX (OPEN)
TO
DV MAIN
JLIP_TX [23]
JLIP_RX [24]
CN108
JLIP_RX [35]
JLIP_TX [31]
TO REG
CN301

4.4 DECK CPU SCHEMATIC DIAGRAM

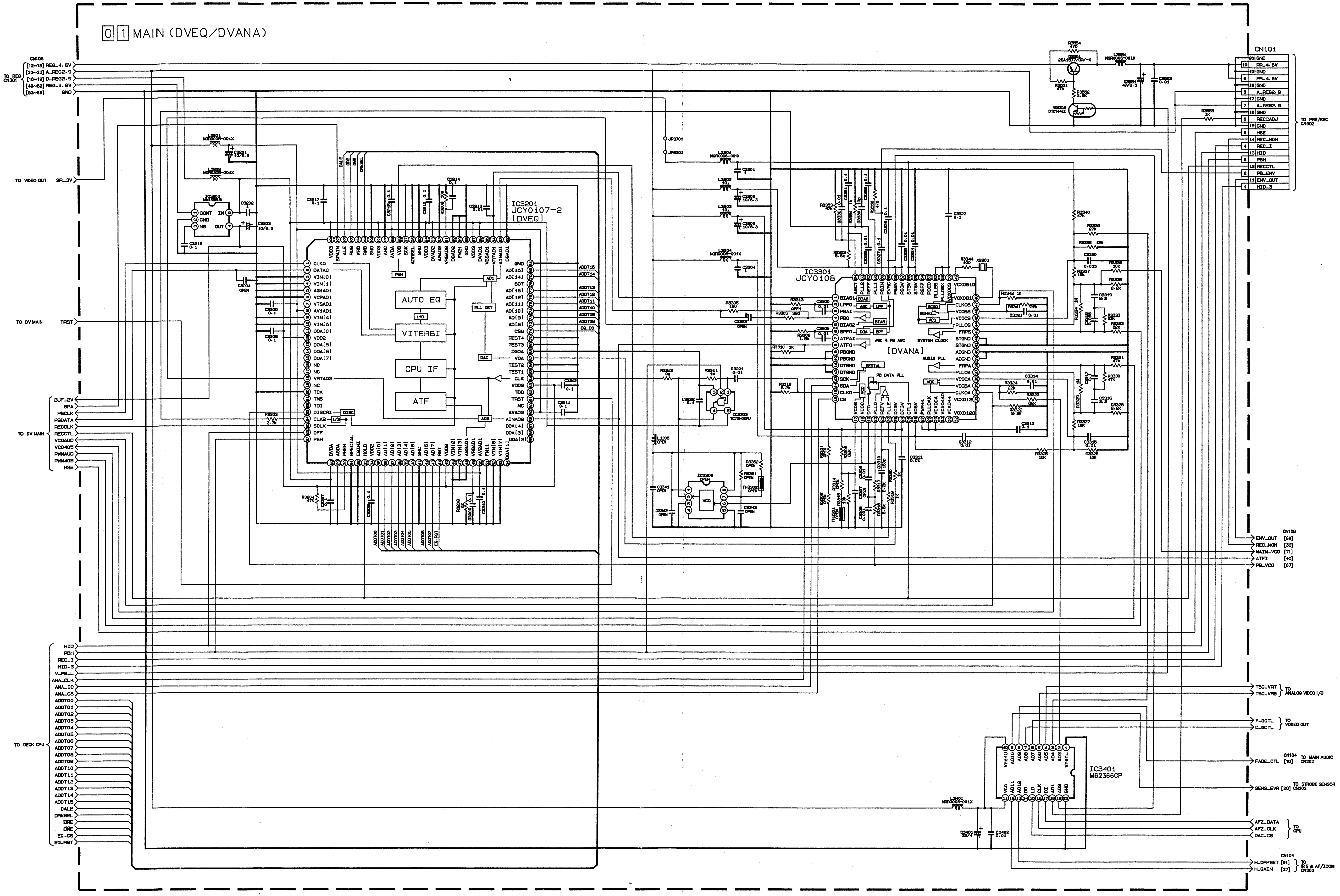


0 1 MAIN (DECK CPU)
TO REG CN301
CN108
[16~19] D_REG2.9
[53~66] GND
L1402
TO AUDIO AD/DA
ADC_PWD1
ADC_PWD0
ADC_DEM1
ADC_DEM0
TO MAIN AUDIO CN202
CN104
[77] AUDIO_CS
[14] AU_LCD_CLK
[79] AU_LCD_IN
TO VIDEO OUT
IR_OUT
IR_AMP
TALLY
IR_RMC
R1448 15k
R1447 10k
R1449 4.7k
R1450 10k
R1451 220k
R1452 330k
TO DV MAIN, DVEQ/DVANA, DSP
FRP
SPA
TSR
HID
CAM_VD
TO MONITOR CN701
CN107
[48] M_RVS
[36] ROM_CS
[35] VF_CS
[38] M_CS
[37] AU_LCD_CLK
[40] AU_LCD_IN
[39] AU_LCD_OUT
TO MAIN AUDIO CN202
CN104
[12] BUZZER
TO VIDEO OUT
ASPECT1
ASPECT2
AGC_RST
S_DC_IN
EXT_IN_H
EXT_IN_L
TO ANALOG VIDEO I/O
TBC_VD
TBC_CLK
TBC_SDI
TBC_SDO
TBC_CS
TBC_RST
EXT_IN_L
EXT_IN_H
S_IN_L
NOINT
TO CPU
EEPROM_CS
SRV_CS
S_CLK
S_DT_IN
S_DT_OUT
SRV_RDY
SRV_RST
OSD_CLK
OSD_DATA
OSD_CS
PWR_CTL
V_MUTE
SCR_UD
SCR_LR
ODD_EVEN
SRV_RX
SRV_TX
R1420 47K
R1421 OPEN
IC1403 TC7W66FK
TO CPU AL_3VSYS
TO REG CN301
(CN108-79) D_GAIN
(CN108-43,44) DRUM_PWR
(CN108-5,6) CAP_PWR
(CN108-1) DRUM_ERR
(CN108-41) CAP_ERR
R1474 4.7K
Q1406 DTC144EE
R1443 0
R1444 0
TO MDA CN405
CN102
CAP_ERR 22
DRUM_ERR 1
CAP_PWR 23
CAP_PWR 24
DRUM_PWR 2
DRUM_PWR 3
DRUM_REF 4
CAP_REF 9
CAP_FG 10
DRUM_PG 8
DRUM_FG 25
MDA_CLK 7
MDA_IN 6
MDA_CS 27
C_SD 26
CAP_BRK 8
LD_ON 31
TO SHUTTER MDA CN202
CN104
[81] S_OPEN
[16] S_CLOSE
[82] OPEN_SW
[17] CLOSE_SW
IC1401
YQ44846A
IC1401 No Connect Pins of CSP Package are here.
Q1408 2SC4617/QR/-X
Q1407 DTC144EE
Q1401 DTA114EE
Q1402 UN53A
Q1403 UN53A
IC1405 TC7S14FK
Q1405 DTC143EE
L1401
TO DV MAIN, VIDEO OUT
HP_DET
P_DET
S_DET
REM_OUT
TO REG CTL
GND
A_REG2.9
M_REG4.8
M_UNREG
TO CPU
CAS_SW
TO MDA CN405
CN102
34 CAS_SW
11 M_UNREG
33 M_REG4.8
32 M_REG4.8
13 A_REG2.9
12 A_REG2.9
40 TAPE_GND
30 GND
29 GND
28 GND
20 NC
37 T_REEL
17 S_REEL
19 TAPE_LED
18 TAPE_LED
38 REEL_LED
16 S_SENS
39 E_SENS
21 DEW_SENS
35 MIC3
15 MIC2
36 MIC1
14 REC_SAFE
MENU_P_A (CN109-10)
MENU_P_B (CN109-11)
KEY_A (CN108-76)
KEY_B (CN107-19)
KEY_C (CN109-12)
KEY_D (CN107-50)
ZOOM_SW (CN108-37)
TO VIDEO OUT
CAM_SW_A
CAM_SW_B
CAM_SW_C
TO DVEQ/DVANA
PBH
REC_I
HID_3
V_PB_L
TO DV MAIN, DVEQ/DVANA
EQ_RST
DV_RST
DV_CS
EQ_CS
DV_WAIT
DRE
DALE
DRWSEL
DRE
ADDT00
ADDT01
ADDT02
ADDT03
ADDT04
ADDT05
ADDT06
ADDT07
ADDT08
ADDT09
ADDT10
ADDT11
ADDT12
ADDT13
ADDT14
ADDT15
TO DV MAIN, DVEQ/DVANA
PHY_CNA
PHY_RST
PHY_PD
ANA_PD
ANA_IO
ANA_CLK
ANA_CS
TO DSP
OCLK27
TO REG CN301
CN108
JIG_SCK [27]
JIG_MOD [34]
JIG_SPT [28]
VPPO [36]
IC1406 OPEN

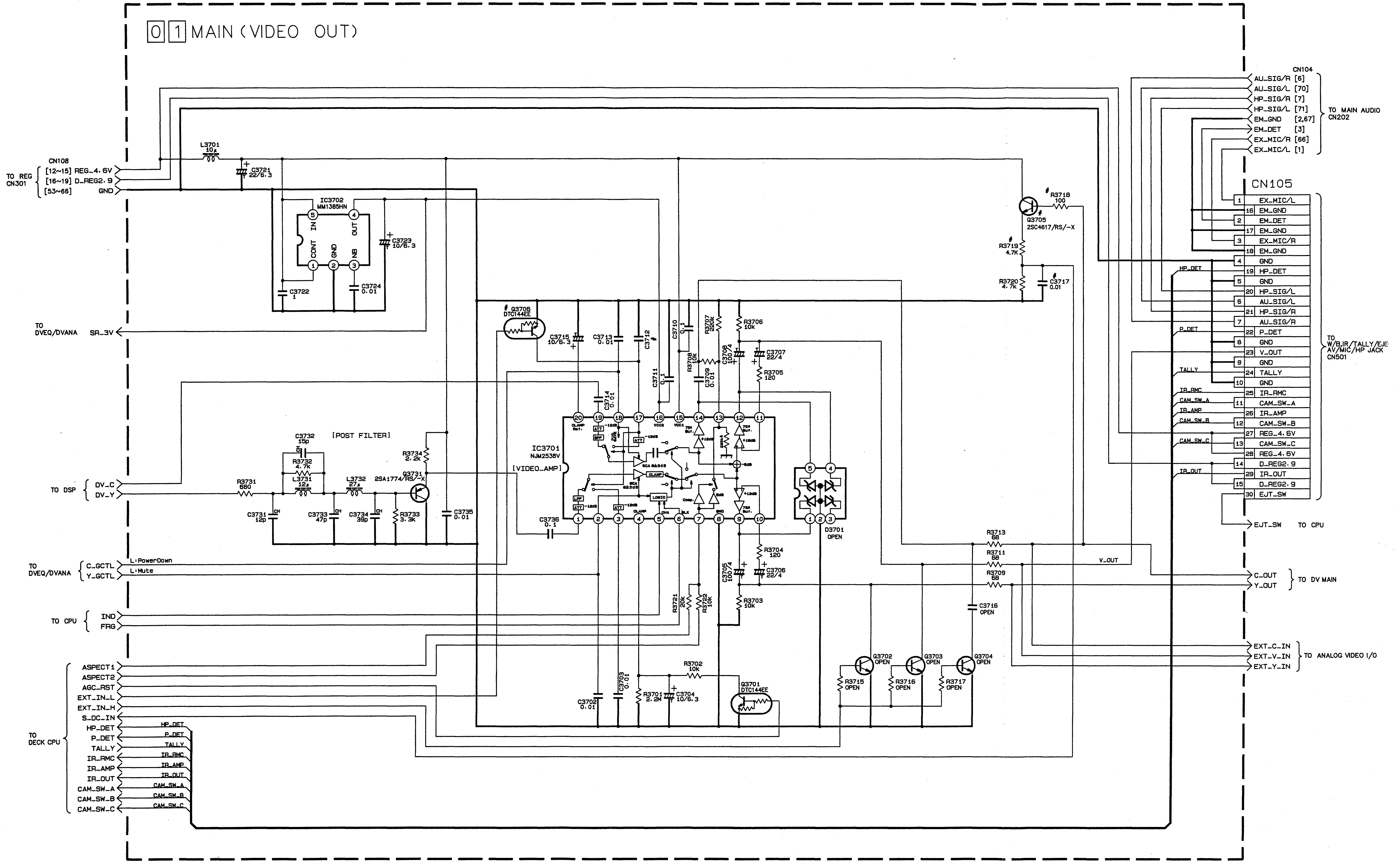
4.5 DV MAIN SCHEMATIC DIAGRAM


0 1 MAIN (DV MAIN)
IC3001
JCY0106-2
[DVMAIN]
IC3002
YQ44835A
[16M_DRAM]
CN106
CN108
CN104
IC3004
TC7SL00FU
IC3005
SN74AHC1004K
X3001
FROM/TO PHY
TO DECK CPU, DVEQ/DVANA
TO DVEQ/DVANA
TO JACK, PHY CN601
TO VIDEO OUT
TO DECK CPU
TO PC IF
TO DSC CN202
TO AUDIO AD/DA
TO DVEQ/DVANA, DSP
D_REG2.9
REG_1.8V
GND
SPA
SBE
FS_PLL
BUF_2V
VCOAUD
PWMAUD
RECCLK
PBCLK
PBDATA
PWM405
VCO405
RECCTL
HSE
Y_OUT
C_OUT
REM_OUT
PC_TX
PC_RX
PRN_TX
PRN_RX
JLIP_TX
JLIP_RX
DREQ [30]
SRCLK [96]
SDI [31]
XSDEN [95]
DOLRCK
DOBCK
DOMCK
DODAT
AIDAT
S_DET
PHY_RST
PHY_PD
PHY_CNA
ANA_PD
HID
TSR
FRP
DV_RST
DALE
DV_CS
DV_WAIT

4.6 DVEQ/DVANA SCHEMATIC DIAGRAM


01 MAIN (DVEQ/DVANA)
CN106
[12~15] REG_4.6V
[20~23] A_REG2.9
[16~19] D_REG2.9
[48~52] REG_1.6V
[53~66] GND
TO REG CN301
TO VIDEO OUT
SR_3V
TO DV MAIN
TRST
BUF_2V
SPA
PBCLK
PBDATA
RECCLK
RECCTL
VCOAUD
VCO405
PWMAUD
PWM405
HSE
HID
PBH
REC_I
HID_3
V_PB_L
ANA_CLK
ANA_IO
ANA_CS
ADDT00
ADDT01
ADDT02
ADDT03
ADDT04
ADDT05
ADDT06
ADDT07
ADDT08
ADDT09
ADDT10
ADDT11
ADDT12
ADDT13
ADDT14
ADDT15
DALE
DRWSEL
DRE
DWE
EQ_CS
EQ_RST
TO DECK CPU
L3201 NQR0005-001X
C3201 10/6.3
L3202 NQR0005-001X
IC3203 MM1385UN
CONT
IN
GND
NB
OUT
C3202
C3203 10/6.3
C3216 0.1
C3204 OPEN
C3205 0.1
C3206 0.1
R3203 2.7K
C3217 0.1
C3214 0.1
C3215 0.1
C3213 0.01
IC3201
JCY0107-2
[DVEQ]
AUTO EQ
VITERBI
CPU IF
ATF
PLL DET
DAC
DISC
AD1
AD2
PWM
I+Q
C3212 0.1
C3211 0.1
R3204 47K
C3207
C3208
C3209
C3210 0.1
JP3701
JP3301
L3301 NQR0005-001X
C3301 1
L3302 10μ
C3302 10/6.3
L3303 10μ
C3303 10/6.3
L3304 NQR0005-001X
C3304 1
R3305 180
C3323 OPEN
R3212 0Ω
R3211 1M
C3221 0.01
C3222 0.1
IC3202 TC7SH00FU
L3305 OPEN
C3341 OPEN
C3342 OPEN
IC3302 OPEN
VCO
C3343 OPEN
R3362 OPEN
R3361 OPEN
TH3302 OPEN
IC3301
JCY0108
[DVANA]
BIAS
AGC
LPF
BPF
SCA
VCXO
VCO
SERIAL
PB DATA PLL
AUDIO PLL
SYSTEM CLOCK
AGC & PB AGC
R3344 100
X3301
R3342 1K
R3341 82K
C3321 0.01
C3322 0.1
C3312 0.01
C3311 0.01
C3313 0.1
C3314 0.01
R3324 22K
R3323 82K
R3322 2.2K
R3326 10K
R3325 10K
R3340 47K
R3339 27K
R3338 12K
C3320 0.033
R3337 10K
R3336 10K
R3335 8.2K
C3319 2.2
R3333 33K
R3332 82K
R3331 47K
R3330 47K
C3316 2.2
R3328 8.2K
R3327 10K
C3315 0.01
R3354 470
Q3351 2SA1577/QR/-X
L3351 NQR0005-001X
R3351 47K
R3352 3.9K
C3351 47/6.3
C3352 0.01
Q3352 DTC144EE
R3353 1K
CN101
20 GND
10 PR_4.6V
19 GND
9 PR_4.6V
18 GND
8 A_REG2.9
17 GND
7 A_REG2.9
16 GND
6 RECCADJ
15 GND
5 HSE
14 REC_MON
4 REC_I
13 HID
3 PBH
12 RECCTL
2 PB_ENV
11 ENV_OUT
1 HID_3
TO PRE/REC CN902
CN108
ENV_OUT [69]
REC_MON [30]
MAIN_VCO [71]
ATFI [40]
PB_VCO [67]
TBC_VRT
TBC_VRB
TO ANALOG VIDEO I/O
Y_SCTL
C_SCTL
TO VIDEO OUT
IC3401
M62366GP
L3401 NQR0005-001X
C3401 22/4
C3402 0.01
CN104
FADE_CTL [10]
TO MAIN AUDIO CN202
SENS_EVR [20]
TO STROBE SENSOR CN202
AFZ_DATA
AFZ_CLK
DAC_CS
TO CPU
CN104
H_OFFSET [91]
H_GAIN [27]
TO IRIS & AF/ZOOM CN202

4.7 VIDEO OUT SCHEMATIC DIAGRAM



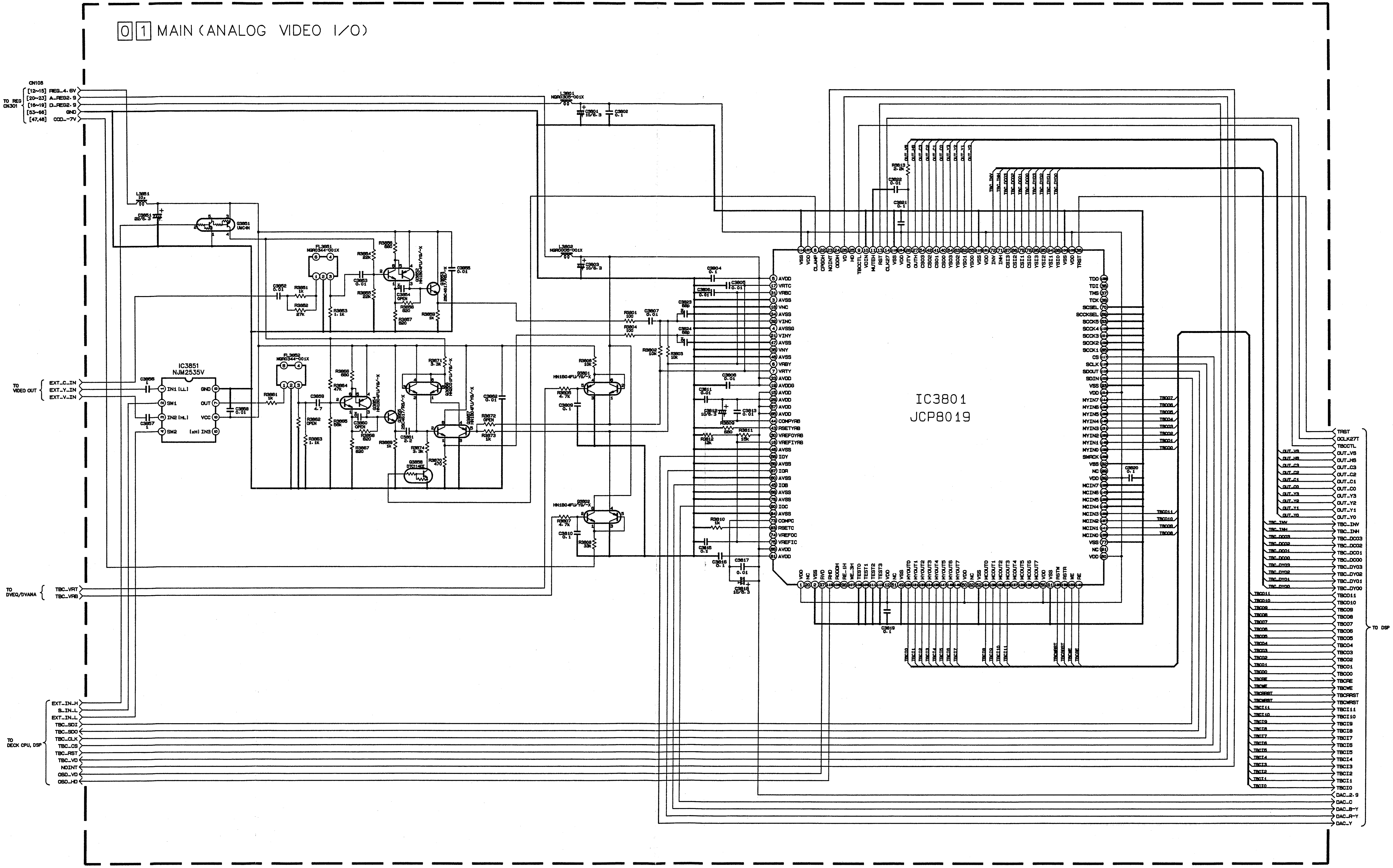
01 MAIN (VIDEO OUT)
TO REG CN301
CN108
[12~15] REG_4.6V
[16~19] D_REG2.9
[53~66] GND
L3701 10μ
C3721 22/6.3
IC3702 MM1385HN
IN
OUT
CONT
GND
NB
C3722 1
C3723 10/6.3
C3724 0.01
TO DVEQ/DVANA
SR_3V
TO DSP
DV_C
DV_Y
[POST FILTER]
C3732 15p
R3732 4.7k
L3731 12μ
R3731 680
C3731 12p
C3733 47p
L3732 27μ
C3734 39p
R3733 3.3k
R3734 2.2k
Q3731 2SA1774/RS/-X
C3735 0.01
TO DVEQ/DVANA
C_GCTL
Y_GCTL
L:PowerDown
L:Mute
TO CPU
IND
FRG
TO DECK CPU
ASPECT1
ASPECT2
AGC_RST
EXT_IN_L
EXT_IN_H
S_DC_IN
HP_DET
P_DET
TALLY
IR_RMC
IR_AMP
IR_OUT
CAM_SW_A
CAM_SW_B
CAM_SW_C
# Q3706 DTC144EE
C3715 10/6.3
C3713 0.01
C3712 #
C3710 0.1
C3711 0.1
R3707 220k
R3708 10k
C3709 0.01
C3708 100/4
R3706 10k
C3707 22/4
R3705 120
C3714 0.01
IC3701 NJM2538V
[VIDEO_AMP]
C3736 0.1
R3704 120
C3705 100/4
C3706 22/4
R3721 20k
R3722 10k
R3703 10k
C3702 0.01
C3703 0.01
R3701 2.2M
C3704 10/6.3
R3702 10k
Q3701 DTC144EE
D3701 OPEN
# R3718 100
# Q3705 2SC4617/RS/-X
# R3719 4.7K
R3720 4.7k
# C3717 0.01
R3713 68
R3711 68
R3709 68
C3716 OPEN
V_OUT
Q3702 OPEN
Q3703 OPEN
Q3704 OPEN
R3715 OPEN
R3716 OPEN
R3717 OPEN
CN104
AU_SIG/R [6]
AU_SIG/L [70]
HP_SIG/R [7]
HP_SIG/L [71]
EM_GND [2,67]
EM_DET [3]
EX_MIC/R [66]
EX_MIC/L [1]
TO MAIN AUDIO CN202
CN105
1 EX_MIC/L
16 EM_GND
2 EM_DET
17 EM_GND
3 EX_MIC/R
18 EM_GND
4 GND
19 HP_DET
5 GND
20 HP_SIG/L
6 AU_SIG/L
21 HP_SIG/R
7 AU_SIG/R
22 P_DET
8 GND
23 V_OUT
9 GND
24 TALLY
10 GND
25 IR_RMC
11 CAM_SW_A
26 IR_AMP
12 CAM_SW_B
27 REG_4.6V
13 CAM_SW_C
28 REG_4.6V
14 D_REG2.9
29 IR_OUT
15 D_REG2.9
30 EJT_SW
TO W/B,IR/TALLY/EJE AV/MIC/HP JACK CN501
EJT_SW
TO CPU
C_OUT
Y_OUT
TO DV MAIN
EXT_C_IN
EXT_V_IN
EXT_Y_IN
TO ANALOG VIDEO I/O

NOTE : COMPARISON CHART OF MODELS & MARKS (#).

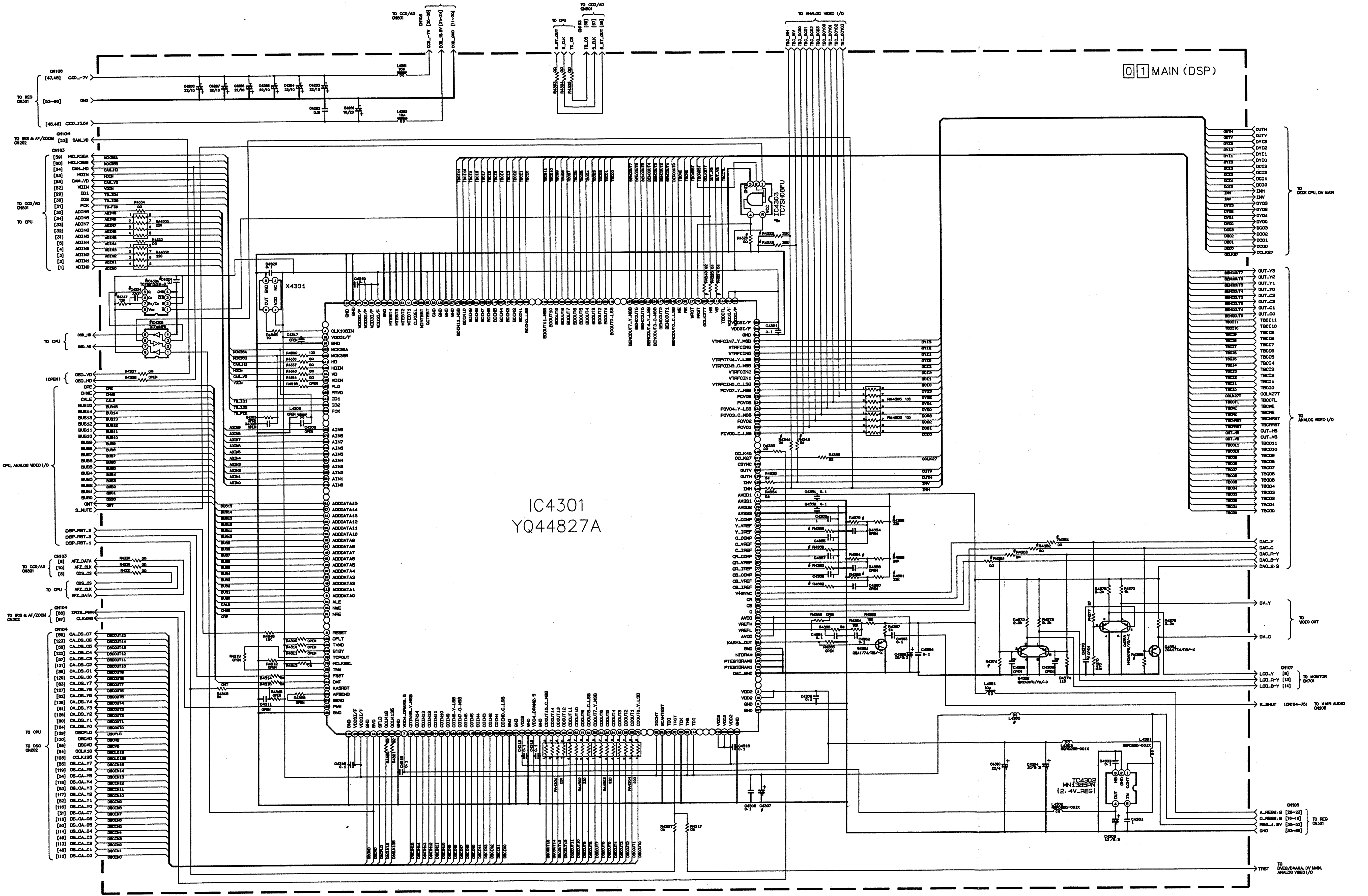
REF No. MODELS	Q3705 Q3706	R3718 R3719	C3712	C3717
VMD10	OPEN	OPEN	0Ω	OPEN
VMD20	USED	USED	0.01	USED

4.8 ANALOG VIDEO I/O SCHEMATIC DIAGRAM

(For VMD20)


01 MAIN (ANALOG VIDEO I/O)
CN108
TO REG CN301
[12~15] REG_4.6V
[20~23] A_REG2.9
[16~19] D_REG2.9
[53~66] GND
[47,48] CCD_-7V
TO VIDEO OUT
EXT_C_IN
EXT_Y_IN
EXT_V_IN
IC3851
NJM2535V
TO DVEQ/DVANA
TBC_VRT
TBC_VRB
TO DECK CPU, DSP
EXT_IN_H
S_IN_L
EXT_IN_L
TBC_SDI
TBC_SDO
TBC_CLK
TBC_CS
TBC_RST
TBC_VD
NOINT
OSD_VD
OSD_HD
IC3801
JCP8019
TRST
OCLK27T
TBCCTL
OUT_VS
OUT_HS
OUT_C3
OUT_C2
OUT_C1
OUT_C0
OUT_Y3
OUT_Y2
OUT_Y1
OUT_Y0
TBC_INV
TBC_INH
TBC_DC03
TBC_DC02
TBC_DC01
TBC_DC00
TBC_DY03
TBC_DY02
TBC_DY01
TBC_DY00
TBCO11
TBCO10
TBCO9
TBCO8
TBCO7
TBCO6
TBCO5
TBCO4
TBCO3
TBCO2
TBCO1
TBCO0
TBCRE
TBCWE
TBCRRST
TBCWRST
TBCI11
TBCI10
TBCI9
TBCI8
TBCI7
TBCI6
TBCI5
TBCI4
TBCI3
TBCI2
TBCI1
TBCI0
DAC_2.9
DAC_C
DAC_B-Y
DAC_R-Y
DAC_Y
TO DSP

4.9 DSP SCHEMATIC DIAGRAM

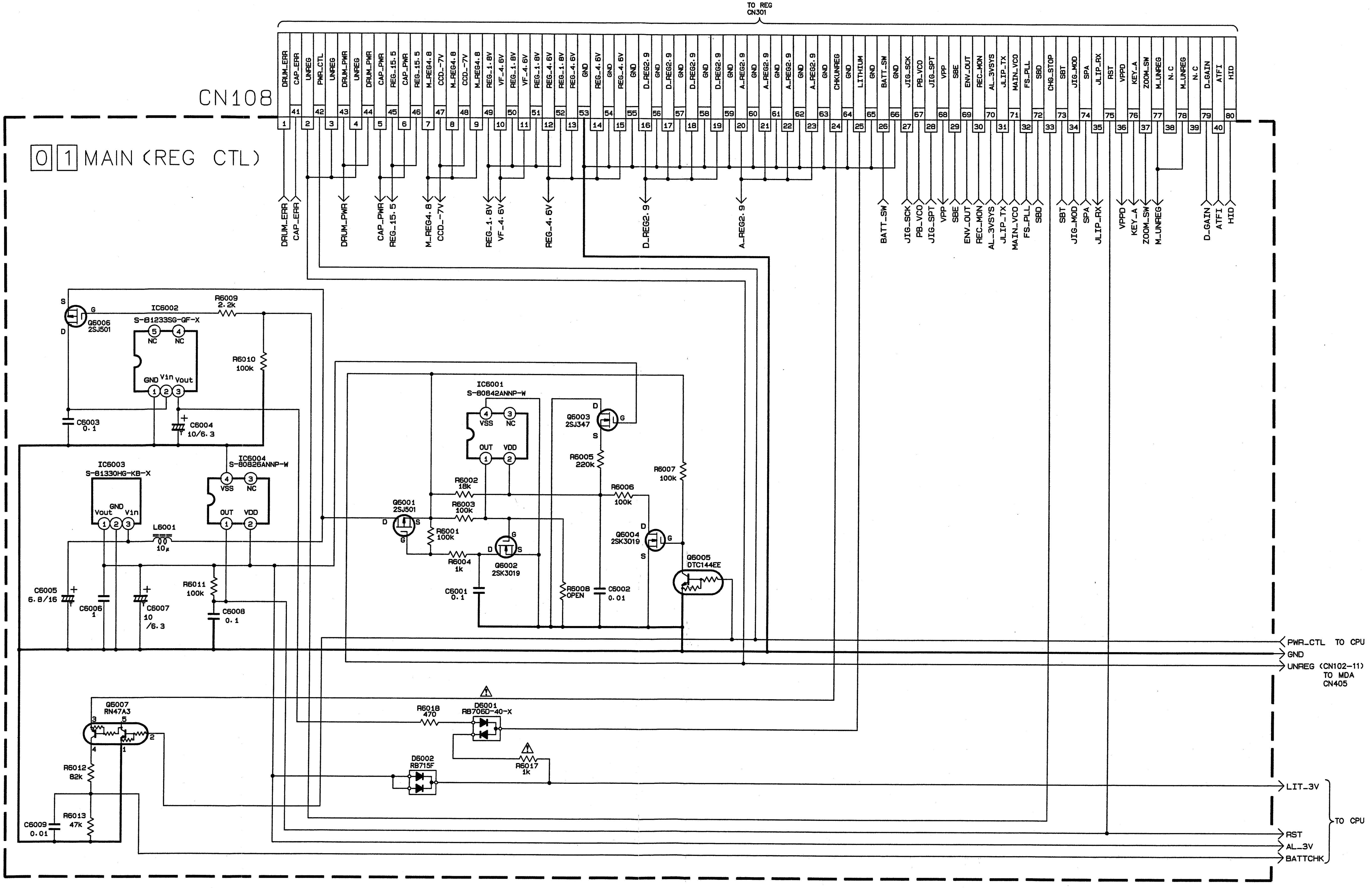


0 1 MAIN (DSP)
IC4301
YQ44827A
IC4303
TC7SH08FU
IC4302
MN1382PN
[2.4V_REG]
X4301
TO CCD/AD CN601
TO CPU
TO REG CN301
TO ANALOG VIDEO I/O
TO DECK CPU, DV MAIN
TO VIDEO OUT
TO MONITOR CN701
TO MAIN AUDIO CN202
TO DVCO/DVANA, DV MAIN, ANALOG VIDEO I/O
TO CPU, ANALOG VIDEO I/O
TO IRIS & AF/ZOOM CN202
TO DISC CN202

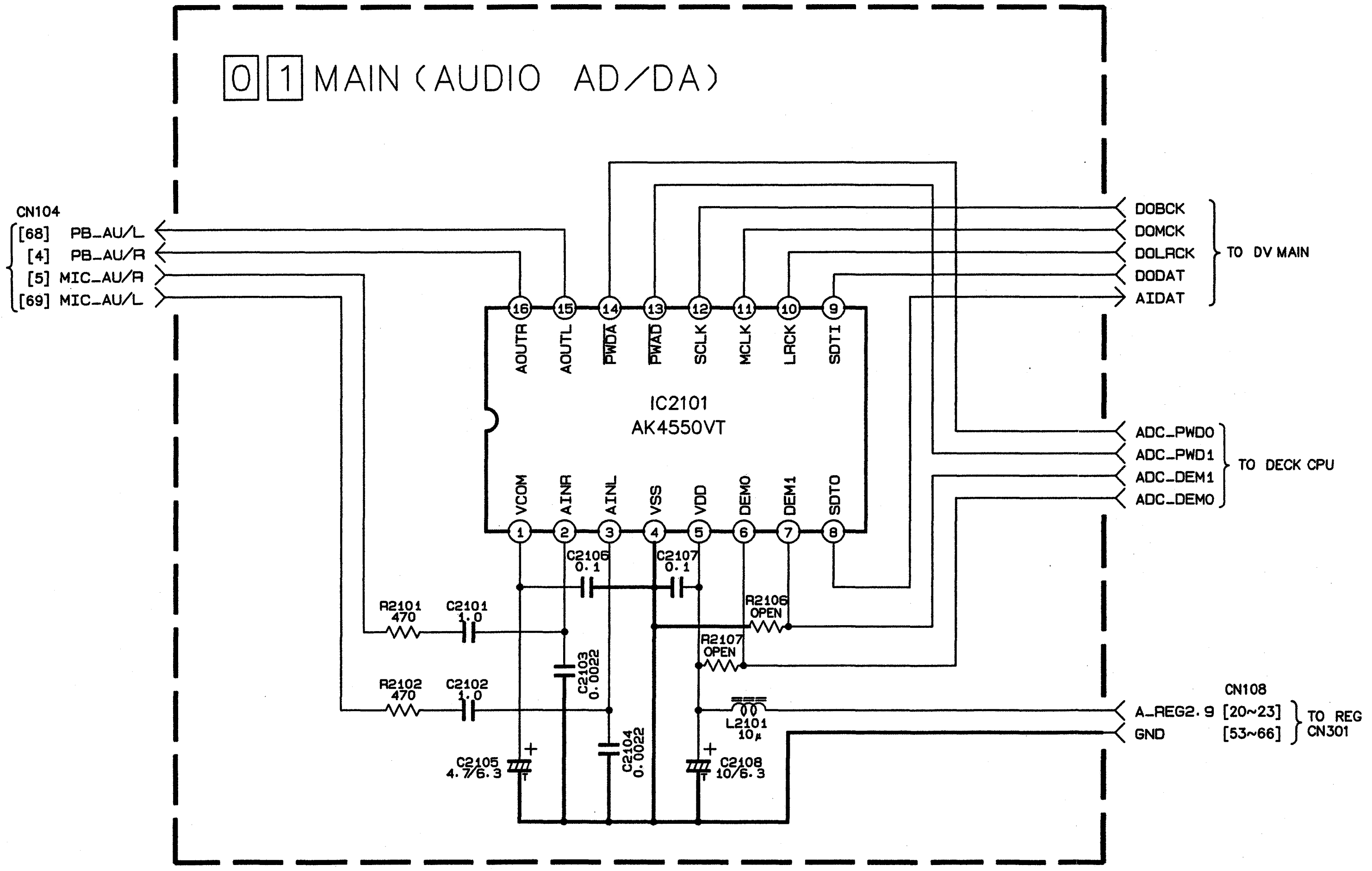
NOTE : COMPARISON CHART OF MODELS & MARKS (#)

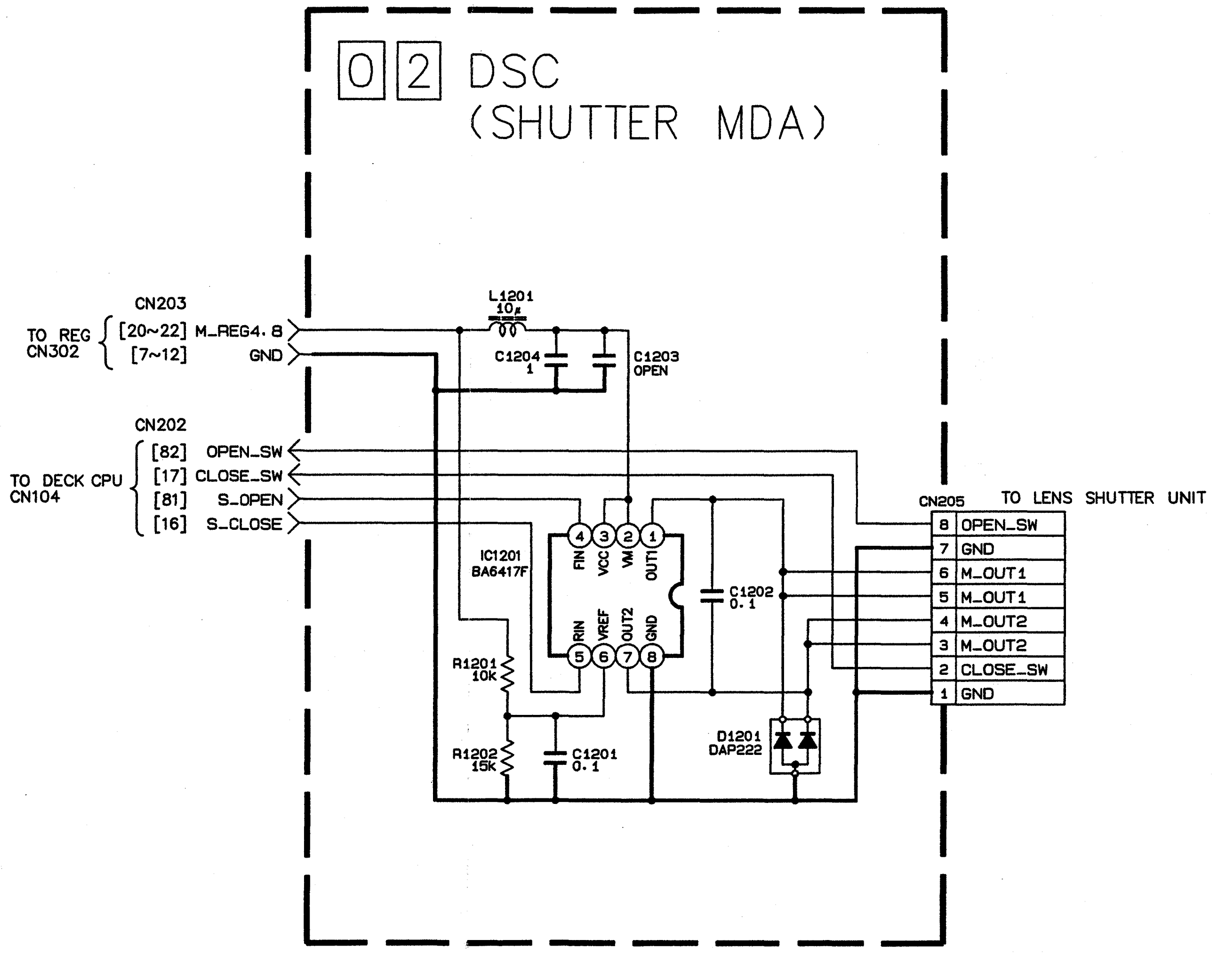
REF No. / MODELS	IC4303	IC4304 IC4305	R4322 ~ R4324	R4326	R4340 ~ R4342	R4347	R4351 ~ R4355	R4356	R4358	R4359 R4361	R4360	R4362	R4369	R4371	R4379	R4381	R4382	C4307	C4323 C4324	L4305
VMD10	OPEN	USED	OPEN	USED	OPEN	USED	USED	33K	16K	USED	16K	16K	180	130	27K	33K	27K	22/4	USED	NQR0251-004X
VMD20	USED	OPEN	USED	OPEN	USED	OPEN	OPEN	2.7K	2.7K	OPEN	2.7K	2.7K	100	150	33K	27K	33K	10/6.3	OPEN	NQR0256-001X

4.10 REG CTL SCHEMATIC DIAGRAM

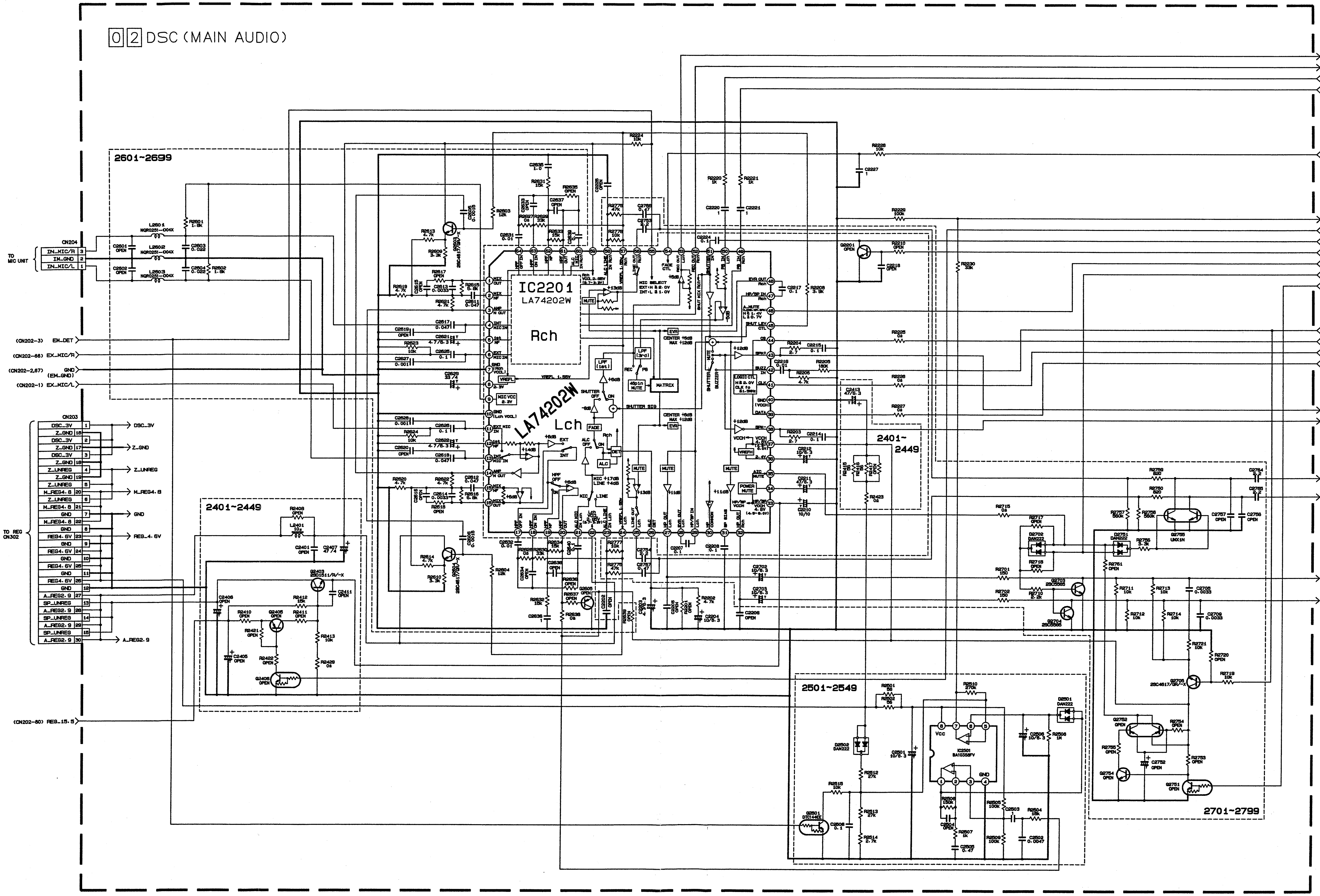

TO REG
CN301
CN108
01 MAIN (REG CTL)
DRUM_ERR
CAP_ERR
UNREG
PWR_CTL
DRUM_PWR
CAP_PWR
REG_15.5
M_REG4.8
CCD_-7V
REG_1.8V
VF_4.6V
REG_4.6V
GND
D_REG2.9
A_REG2.9
CHKUNREG
LITHIUM
BATT_SW
JIG_SCK
PB_VCO
JIG_SPT
VPP
SBE
ENV_OUT
REC_MON
AL_3VSYS
JLIP_TX
MAIN_VCO
FS_PLL
SBD
CHG_STOP
SBT
JIG_MOD
SPA
JLIP_RX
RST
VPPD
KEY_A
ZOOM_SW
M_UNREG
N.C
D_GAIN
ATFI
HID
Q6006
2SJ501
IC6002
S-81233SG-QF-X
R6009
2.2k
R6010
100k
C6003
0.1
C6004
10/6.3
IC6003
S-81330HG-KB-X
Vout GND Vin
IC6004
S-80826ANNP-W
VSS NC OUT VDD
L6001
10µ
C6005
6.8/16
C6006
1
C6007
10
/6.3
R6011
100k
C6008
0.1
IC6001
S-80842ANNP-W
Q6001
2SJ501
R6002
18k
R6003
100k
R6001
100k
R6004
1k
Q6002
2SK3019
C6001
0.1
Q6003
2SJ347
R6005
220k
R6006
100k
R6007
100k
Q6004
2SK3019
Q6005
DTC144EE
R6008
OPEN
C6002
0.01
PWR_CTL TO CPU
GND
UNREG (CN102-11) TO MDA CN405
Q6007
RN47A3
R6018
470
D6001
RB706D-40-X
D6002
RB715F
R6017
1k
R6012
82k
R6013
47k
C6009
0.01
LIT_3V
RST
AL_3V
BATTCHK
TO CPU

4.11 AUDIO AD/DA AND SHUTTER MDA SCHEMATIC DIAGRAM

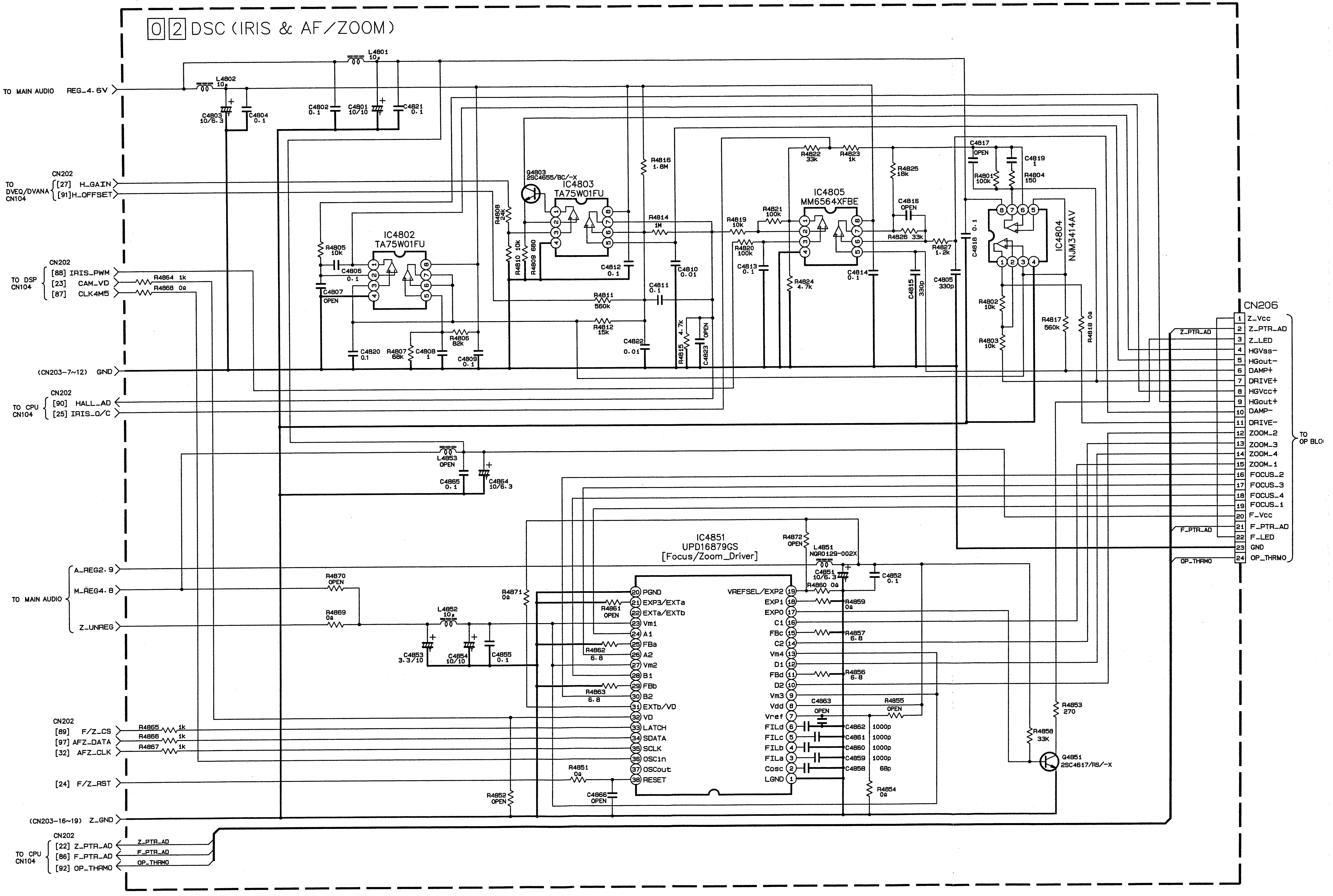

0 1 MAIN (AUDIO AD/DA)
CN104
[68] PB_AU/L
[4] PB_AU/R
[5] MIC_AU/R
[69] MIC_AU/L
IC2101
AK4550VT
16 AOUTR
15 AOUTL
14 PWDA
13 PWAD
12 SCLK
11 MCLK
10 LRCK
9 SDTI
1 VCOM
2 AINR
3 AINL
4 VSS
5 VDD
6 DEM0
7 DEM1
8 SDTO
DOBCK
DOMCK
DOLRCK
DODAT
AIDAT
TO DV MAIN
ADC_PWD0
ADC_PWD1
ADC_DEM1
ADC_DEM0
TO DECK CPU
C2106 0.1
C2107 0.1
R2101 470
C2101 1.0
R2102 470
C2102 1.0
C2103 0.0022
C2104 0.0022
C2105 4.7/6.3
R2106 OPEN
R2107 OPEN
L2101 10μ
C2108 10/6.3
CN108
A_REG2.9 [20~23]
GND [53~66]
TO REG CN301


0 2 DSC (SHUTTER MDA)
CN203
TO REG CN302
[20~22] M_REG4.8
[7~12] GND
L1201 10μ
C1204 1
C1203 OPEN
CN202
TO DECK CPU CN104
[82] OPEN_SW
[17] CLOSE_SW
[81] S_OPEN
[16] S_CLOSE
IC1201
BA6417F
4 FIN
3 VCC
2 VM
1 OUT1
5 RIN
6 VREF
7 OUT2
8 GND
C1202 0.1
R1201 10K
R1202 15K
C1201 0.1
D1201 DAP222
CN205
TO LENS SHUTTER UNIT
8 OPEN_SW
7 GND
6 M_OUT1
5 M_OUT1
4 M_OUT2
3 M_OUT2
2 CLOSE_SW
1 GND

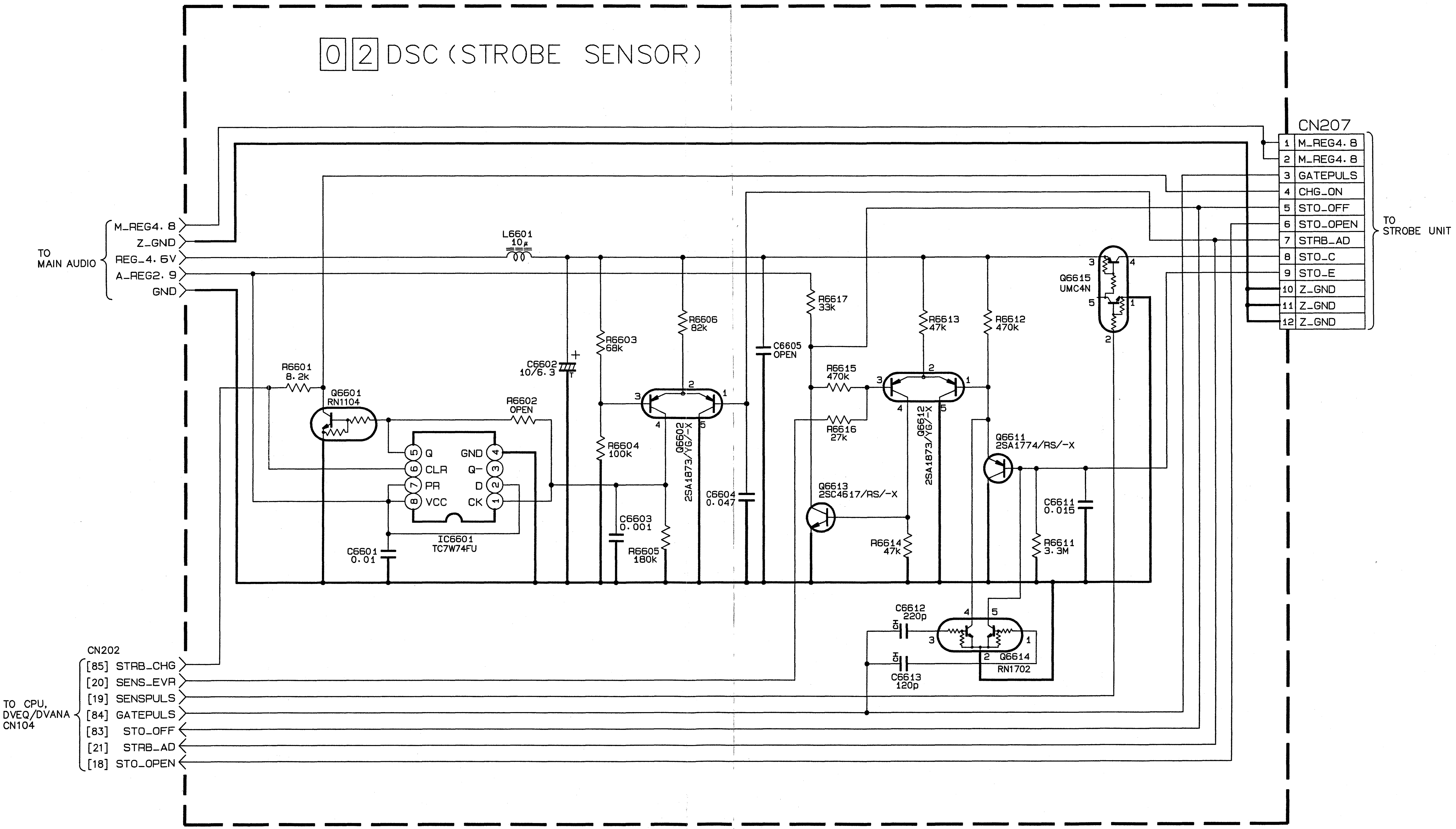
4.12 MAIN AUDIO SCHEMATIC DIAGRAM


02 DSC (MAIN AUDIO)
2601-2699
2401-2449
2401-2449
2501-2549
2701-2799
IC2201
LA74202W
Rch
Lch
LA74202W
IC2501
BA10358FV
TO MIC UNIT
CN204
IN_MIC/R 3
IM_GND 2
IN_MIC/L 1
L2601 NQR0251-004X
L2602 NQR0251-004X
L2603 NQR0251-004X
R2601 1.8k
R2602 1.8k
C2601 OPEN
C2602 OPEN
C2603 0.022
C2604 0.022
(CN202-3) EM_DET
(CN202-66) EX_MIC/R
(CN202-2,67) GND (EM_GND)
(CN202-1) EX_MIC/L
CN203
DSC_3V 1
Z_GND 16
DSC_3V 2
Z_GND 17
DSC_3V 3
Z_GND 18
Z_UNREG 4
Z_GND 19
Z_UNREG 5
M_REG4.8 20
Z_UNREG 6
M_REG4.8 21
GND 7
M_REG4.8 22
GND 8
REG4.6V 23
GND 9
REG4.6V 24
GND 10
REG4.6V 25
GND 11
REG4.6V 26
GND 12
A_REG2.9 27
SP_UNREG 13
A_REG2.9 28
SP_UNREG 14
A_REG2.9 29
SP_UNREG 15
A_REG2.9 30
TO REG CN302
DSC_3V
Z_GND
Z_UNREG
M_REG4.8
GND
REG_4.6V
A_REG2.9
(CN202-80) REG_15.5
CN202
MIC_AU/L [69]
MIC_AU/R [5]
PB_AU/L [68]
PB_AU/R [4]
TO AUDIO AD/DA CN104
CN202
FADE_CTL [10]
TO DVEQ/DVANA CN104
CN202
NR_DET [74]
A_P_CTL [13]
S_SHUT [75]
TO CPU, DSP CN104
S_MUTE (OPEN)
A_MUTE [76]
L_MUTE [78]
TO CPU
PWR_CTL (OPEN)
CN202
BUZZER [12]
AUDIO_CS [77]
AU_LCD_CLK [14]
AU_LCD_IN [79]
TO DECK CPU CN104
CN202
SPK+ [72,73]
SPK- [8,9]
CN202
AU_SIG/R [6]
AU_SIG/L [70]
TO VIDEO OUT CN104
CN202
HP_SIG/L [71]
HP_SIG/R [7]
TO VIDEO OUT CN104
MATRIX
MUTE
EVR
FADE
ALC
DET
LPF (1st)
LPF (3rd)
SHUTTER SIG
VREFL 1.55V
VREFH
POWER MUTE
LOGIC CTL

4.13 IRIS & AF/ZOOM SCHEMATIC DIAGRAM

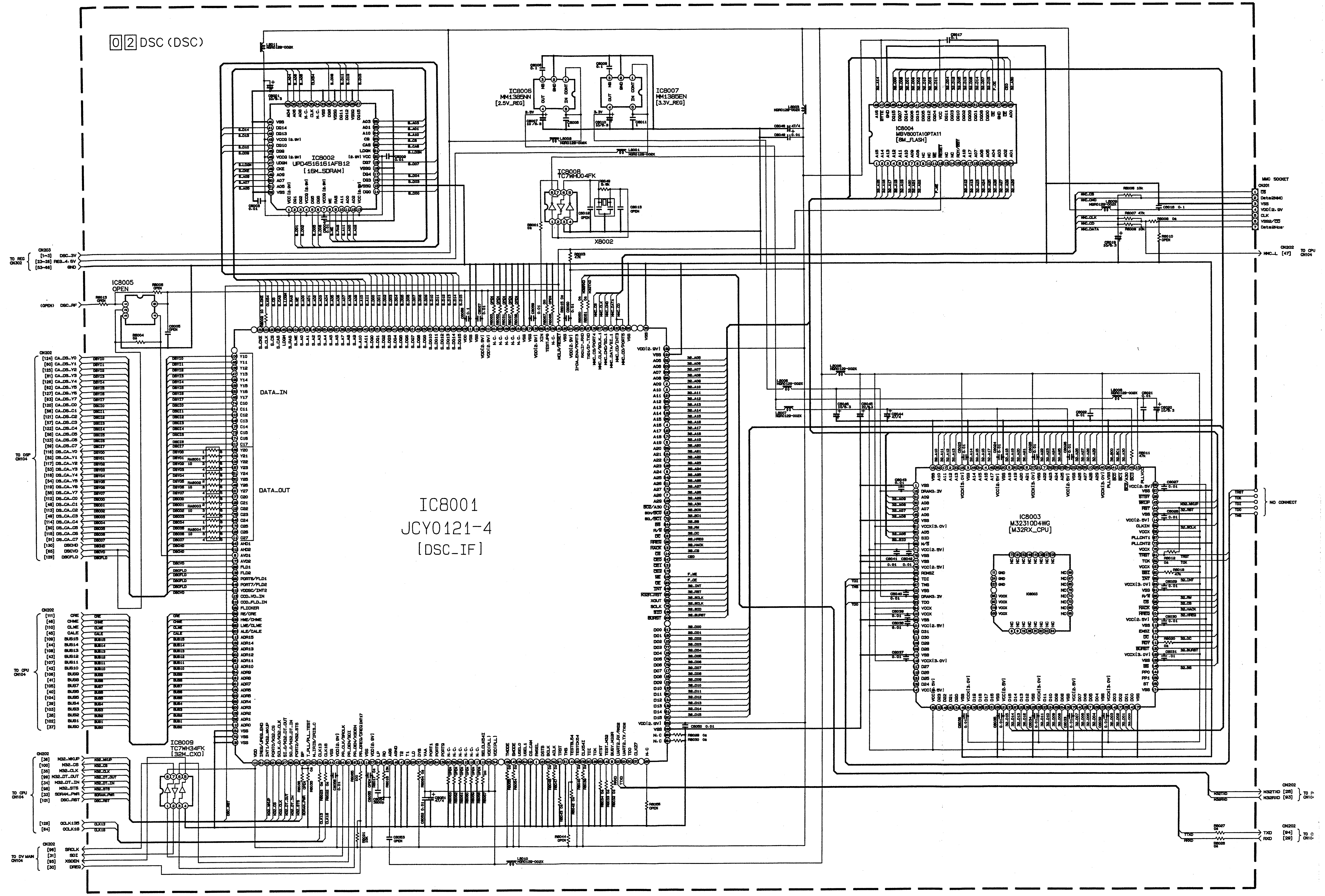

02 DSC (IRIS & AF/ZOOM)
TO MAIN AUDIO REG_4.6V
L4801 10µ
L4802 10µ
C4803 10/6.3
C4804 0.1
C4802 0.1
C4801 10/10
C4821 0.1
CN202
TO DVEQ/DVANA CN104
[27] H_GAIN
[91] H_OFFSET
TO DSP CN104
[88] IRIS_PWM
[23] CAM_VD
[87] CLK4M5
R4864 1k
R4868 0Ω
IC4802 TA75W01FU
R4805 10k
C4806 0.1
C4807 OPEN
C4820 0.1
R4807 68k
C4808 1
R4806 82k
C4809 0.1
Q4803 2SC4655/BC/-X
IC4803 TA75W01FU
R4808 24k
R4810 10k
R4809 680
R4816 1.8M
R4814 1M
C4812 0.1
C4810 0.01
C4811 0.1
R4811 560k
R4812 15k
C4822 0.01
R4815 4.7k
C4823 OPEN
R4822 33k
R4823 1k
R4825 18k
IC4805 MM6564XFBE
R4821 100k
R4819 10k
R4820 100k
C4813 0.1
R4824 4.7k
C4814 0.1
C4816 OPEN
R4826 33k
R4827 1.2k
C4815 330p
C4805 330p
C4818 0.1
C4817 OPEN
R4801 100k
C4819 1
R4804 150
IC4804 NJM3414AV
R4802 10k
R4803 10k
R4817 560k
R4818 0Ω
(CN203-7~12) GND
CN202
TO CPU CN104
[90] HALL_AD
[25] IRIS_O/C
L4853 OPEN
C4865 0.1
C4864 10/6.3
CN206
1 Z_Vcc
2 Z_PTR_AD
3 Z_LED
4 HGVss-
5 HGout-
6 DAMP+
7 DRIVE+
8 HGVcc+
9 HGout+
10 DAMP-
11 DRIVE-
12 ZOOM_2
13 ZOOM_3
14 ZOOM_4
15 ZOOM_1
16 FOCUS_2
17 FOCUS_3
18 FOCUS_4
19 FOCUS_1
20 F_Vcc
21 F_PTR_AD
22 F_LED
23 GND
24 OP_THRMO
Z_PTR_AD
F_PTR_AD
OP_THRMO
TO OP BLO
IC4851 UPD16879GS [Focus/Zoom_Driver]
R4872 OPEN
L4851 NQR0129-002X
C4851 10/6.3
R4860 0Ω
C4852 0.1
TO MAIN AUDIO
A_REG2.9
M_REG4.8
Z_UNREG
R4870 OPEN
R4869 0Ω
L4852 10µ
C4853 3.3/10
C4854 10/10
C4855 0.1
R4871 0Ω
R4861 OPEN
R4862 6.8
R4863 6.8
20 PGND
21 EXP3/EXTa
22 EXTa/EXTb
23 Vm1
24 A1
25 FBa
26 A2
27 Vm2
28 B1
29 FBb
30 B2
31 EXTb/VD
32 VD
33 LATCH
34 SDATA
35 SCLK
36 OSCin
37 OSCout
38 RESET
19 VREFSEL/EXP2
18 EXP1
17 EXP0
16 C1
15 FBc
14 C2
13 Vm4
12 D1
11 FBd
10 D2
9 Vm3
8 Vdd
7 Vref
6 FILd
5 FILc
4 FILb
3 FILa
2 Cosc
1 LGND
R4859 0Ω
R4857 6.8
R4856 6.8
C4863 OPEN
R4855 OPEN
C4862 1000p
C4861 1000p
C4860 1000p
C4859 1000p
C4858 68p
R4854 0Ω
R4853 270
R4858 33K
Q4851 2SC4617/RS/-X
CN202
[89] F/Z_CS
[97] AFZ_DATA
[32] AFZ_CLK
R4865 1k
R4866 1k
R4867 1k
[24] F/Z_RST
R4851 0Ω
C4866 OPEN
R4852 OPEN
(CN203-16~19) Z_GND
CN202
TO CPU CN104
[22] Z_PTR_AD
[86] F_PTR_AD
[92] OP_THRMO

4.14 STROBE SENSOR SCHEMATIC DIAGRAM



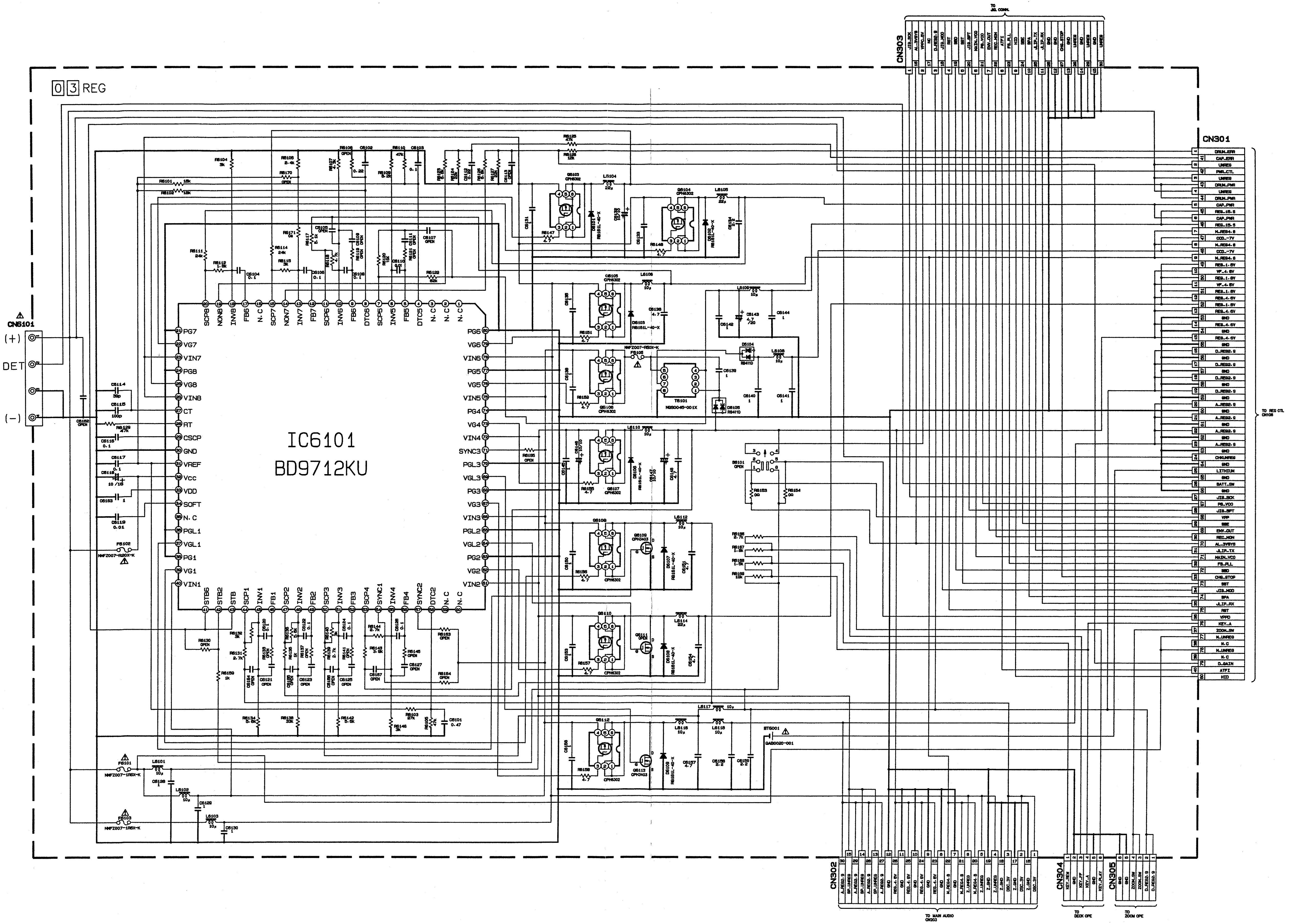
02 DSC (STROBE SENSOR)
TO MAIN AUDIO
M_REG4.8
Z_GND
REG_4.6V
A_REG2.9
GND
L6601 10μ
R6601 8.2k
Q6601 RN1104
R6602 OPEN
IC6601 TC7W74FU
Q
CLR
PR
VCC
GND
Q-
D
CK
C6601 0.01
C6602 10/6.3
R6603 68k
R6604 100k
C6603 0.001
R6605 180k
R6606 82k
Q6602 2SA1873/YG/-X
C6604 0.047
C6605 OPEN
R6617 33k
R6615 470k
R6616 27k
Q6613 2SC4617/RS/-X
R6613 47k
R6614 47k
Q6612 2SA1873/YG/-X
R6612 470k
Q6611 2SA1774/RS/-X
C6611 0.015
R6611 3.3M
Q6615 UMC4N
C6612 220p
C6613 120p
CH
Q6614 RN1702
CN207
1 M_REG4.8
2 M_REG4.8
3 GATEPULS
4 CHG_ON
5 STO_OFF
6 STO_OPEN
7 STRB_AD
8 STO_C
9 STO_E
10 Z_GND
11 Z_GND
12 Z_GND
TO STROBE UNIT
CN202
[85] STRB_CHG
[20] SENS_EVR
[19] SENSPULS
[84] GATEPULS
[83] STO_OFF
[21] STRB_AD
[18] STO_OPEN
TO CPU, DVEQ/DVANA CN104

4.15 DSC SCHEMATIC DIAGRAM

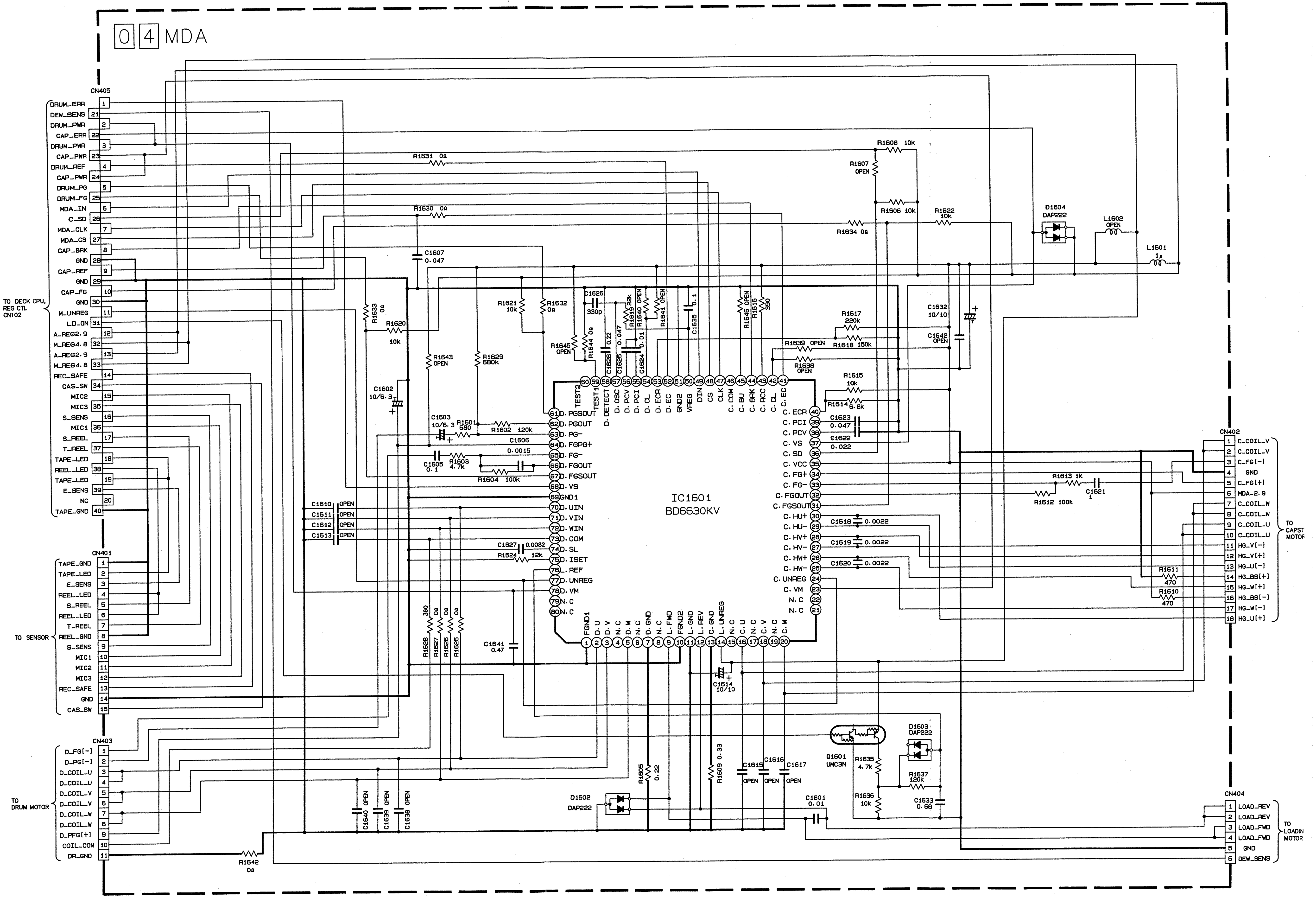


02 DSC (DSC)
IC8001
JCY0121-4
[DSC_IF]
DATA_IN
DATA_OUT
IC8002
UPD4516161AFB12
[16M_SDRAM]
IC8006
MM1385NN
[2.5V_REG]
IC8007
MM1385EN
[3.3V_REG]
IC8008
TC7WHU04FK
X8002
IC8004
MBV800TA10PTA11
[8M_FLASH]
IC8003
M32310D4WG
[M32RX_CPU]
IC8005
OPEN
IC8009
TC7WH34FK
[32M_CXO]
MMC SOCKET
NO CONNECT
TO REC CN302
TO DSP CN104
TO CPU CN104
TO DV MAIN CN104
CN202
CN203

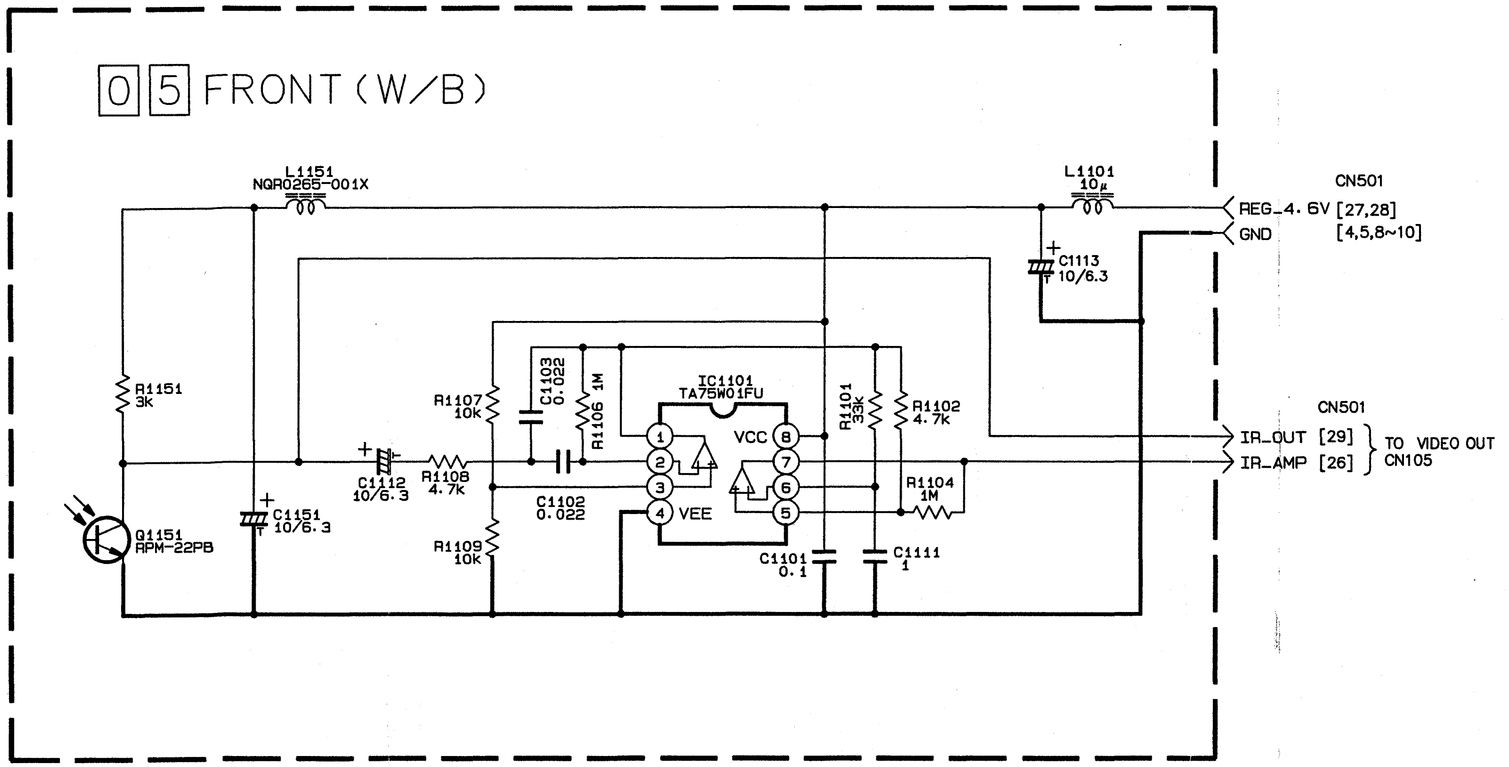
4.16 REGULATOR SCHEMATIC DIAGRAM

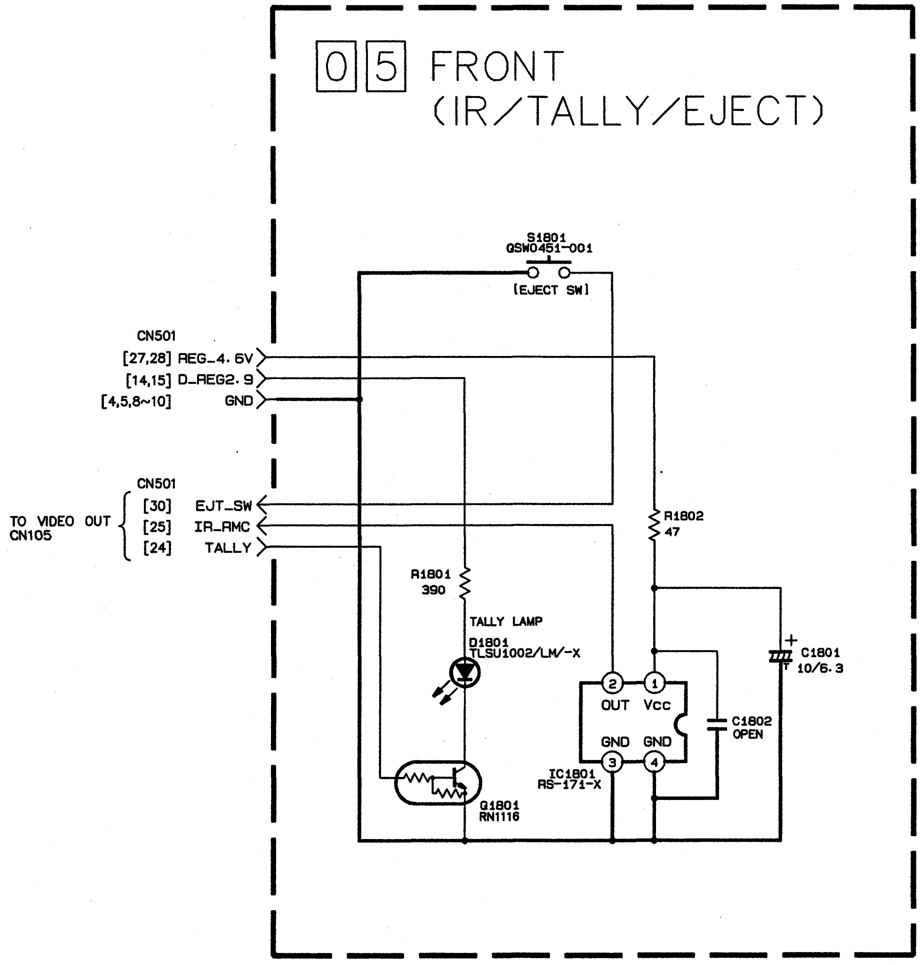

0 3 REG
IC6101
BD9712KU
CN5101
(+)
DET
(−)
CN301
TO REG CTL CN106
CN303
TO JIG CONN.
CN302
TO MAIN AUDIO CN203
CN304
TO DECK OPE
CN305
TO ZOOM OPE
T6101
S6101
ST6001
SCP8
NON8
INV8
FB8
N.C
SCP7
NON7
INV7
FB7
SCP6
INV6
FB6
DTC6
SCP5
INV5
FB5
DTC5
PG7
VG7
VIN7
PG8
VG8
VIN8
CT
RT
CSCP
GND
VREF
Vcc
VDD
SOFT
PGL1
VGL1
PG1
VG1
VIN1
PG6
VG6
VIN6
PG5
VG5
VIN5
PG4
VG4
VIN4
SYNC3
PGL3
VGL3
PG3
VG3
VIN3
PGL2
VGL2
PG2
VG2
VIN2
STB6
STB2
STB
SCP1
INV1
FB1
SCP2
INV2
FB2
SCP3
INV3
FB3
SCP4
SYNC1
INV4
FB4
SYNC2
DTC2
Q6103
Q6104
Q6105
Q6106
Q6107
Q6108
Q6109
Q6110
Q6111
Q6112
Q6113
CPH6302
CPH3403
RB161L-40-X
NNFZ007-R50X-K
NNFZ007-1R5X-K
NNFZ007-R20X-K
QAB0020-001
F6101
F6102
F6103
F6105
L6101
L6102
L6103
L6104
L6105
L6106
L6108
L6109
L6110
L6112
L6114
L6115
L6116
L6117

4.17 MDA SCHEMATIC DIAGRAM

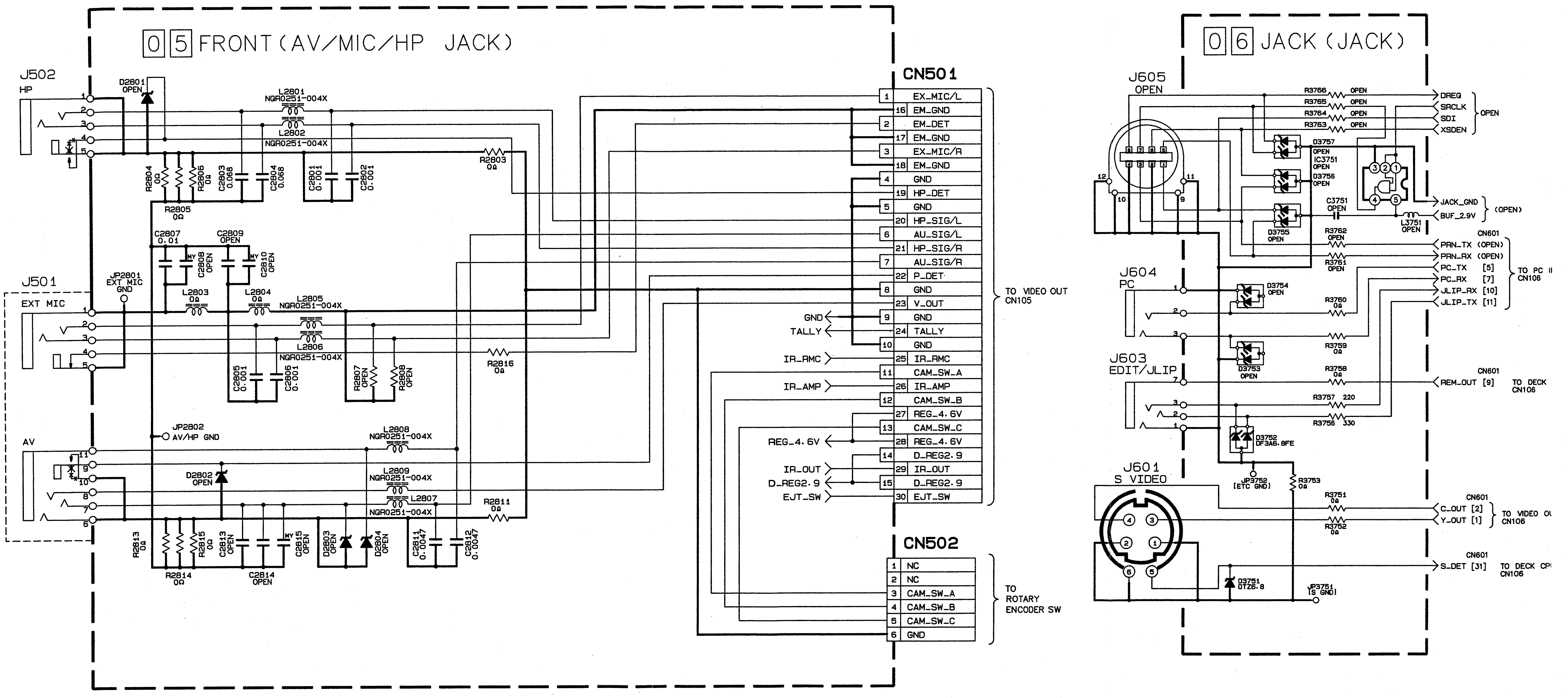

04 MDA
CN405
1 DRUM_ERR
21 DEW_SENS
2 DRUM_PWR
22 CAP_ERR
3 DRUM_PWR
23 CAP_PWR
4 DRUM_REF
24 CAP_PWR
5 DRUM_PG
25 DRUM_FG
6 MDA_IN
26 C_SD
7 MDA_CLK
27 MDA_CS
8 CAP_BRK
28 GND
9 CAP_REF
29 GND
10 CAP_FG
30 GND
11 M_UNREG
31 LD_ON
12 A_REG2.9
32 M_REG4.8
13 A_REG2.9
33 M_REG4.8
14 REC_SAFE
34 CAS_SW
15 MIC2
35 MIC3
16 S_SENS
36 MIC1
17 S_REEL
37 T_REEL
18 TAPE_LED
38 REEL_LED
19 TAPE_LED
39 E_SENS
20 NC
40 TAPE_GND
TO DECK CPU, REG CTL CN102
CN401
1 TAPE_GND
2 TAPE_LED
3 E_SENS
4 REEL_LED
5 S_REEL
6 REEL_LED
7 T_REEL
8 REEL_GND
9 S_SENS
10 MIC1
11 MIC2
12 MIC3
13 REC_SAFE
14 GND
15 CAS_SW
TO SENSOR
CN403
1 D_FG[-]
2 D_PG[-]
3 D_COIL_U
4 D_COIL_U
5 D_COIL_V
6 D_COIL_V
7 D_COIL_W
8 D_COIL_W
9 D_PFG[+]
10 COIL_COM
11 DR_GND
TO DRUM MOTOR
R1642 0Ω
R1631 0Ω
R1630 0Ω
C1607 0.047
R1633 0Ω
R1620 10k
C1602 10/6.3
R1643 OPEN
R1629 680K
C1603 10/6.3
R1601 680
R1602 120k
C1606 0.0015
C1605 0.1
R1603 4.7k
R1604 100k
R1621 10k
R1632 0Ω
R1645 OPEN
R1644 0Ω
C1626 330p
C1628 0.22
C1625 0.047
R1619 22k
R1640 OPEN
C1624 0.01
R1641 OPEN
C1635 0.1
R1646 OPEN
R1616 390
C1610 OPEN
C1611 OPEN
C1612 OPEN
C1613 OPEN
C1627 0.0082
R1624 12k
C1641 0.47
R1628 360
R1627 0Ω
R1626 0Ω
R1625 0Ω
C1640 OPEN
C1639 OPEN
C1638 OPEN
IC1601
BD6630KV
60 TEST2
59 TEST1
58 D.DETECT
57 D.OSC
56 D.PCV
55 D.PCI
54 D.CL
53 D.ECR
52 D.EC
51 GND2
50 VREG
49 DIN
48 CS
47 CLK
46 C.COM
45 C.BU
44 C.BRK
43 C.RCC
42 C.CL
41 C.EC
61 D.PGSOUT
62 D.PGOUT
63 D.PG-
64 D.FGPG+
65 D.FG-
66 D.FGOUT
67 D.FGSOUT
68 D.VS
69 GND1
70 D.UIN
71 D.VIN
72 D.WIN
73 D.COM
74 D.SL
75 D.ISET
76 L.REF
77 D.UNREG
78 D.VM
79 N.C
80 N.C
1 FGND1
2 D.U
3 D.V
4 N.C
5 D.W
6 N.C
7 D.GND
8 N.C
9 L.FWD
10 FGND2
11 L.GND
12 L.REV
13 C.GND
14 L.UNREG
15 N.C
16 C.U
17 N.C
18 C.V
19 N.C
20 C.W
40 C.ECR
39 C.PCI
38 C.PCV
37 C.VS
36 C.SD
35 C.VCC
34 C.FG+
33 C.FG-
32 C.FGOUT
31 C.FGSOUT
30 C.HU+
29 C.HU-
28 C.HV+
27 C.HV-
26 C.HW+
25 C.HW-
24 C.UNREG
23 C.VM
22 N.C
21 N.C
R1608 10k
R1607 OPEN
R1606 10k
R1634 0Ω
R1622 10k
D1604 DAP222
L1602 OPEN
L1601 1μ
C1632 10/10
C1642 OPEN
R1617 220k
R1639 OPEN
R1618 150k
R1638 OPEN
R1615 10k
R1614 5.6k
C1623 0.047
C1622 0.022
C1618 0.0022
C1619 0.0022
C1620 0.0022
R1613 1k
R1612 100k
C1621 1
R1611 470
R1610 470
C1614 10/10
R1605 0.22
R1609 0.33
D1602 DAP222
C1615 OPEN
C1616 OPEN
C1617 OPEN
C1601 0.01
Q1601 UMC3N
R1635 4.7k
R1636 10k
D1603 DAP222
R1637 120k
C1633 0.68
CN402
1 C_COIL_V
2 C_COIL_V
3 C_FG[-]
4 GND
5 C_FG[+]
6 MDA_2.9
7 C_COIL_W
8 C_COIL_W
9 C_COIL_U
10 C_COIL_U
11 HG_V[-]
12 HG_V[+]
13 HG_U[-]
14 HG_BS[+]
15 HG_W[+]
16 HG_BS[-]
17 HG_W[-]
18 HG_U[+]
TO CAPST MOTOR
CN404
1 LOAD_REV
2 LOAD_REV
3 LOAD_FWD
4 LOAD_FWD
5 GND
6 DEW_SENS
TO LOADIN MOTOR

4.18 W/B AND IR/TALLY/EJECT SCHEMATIC DIAGRAMS

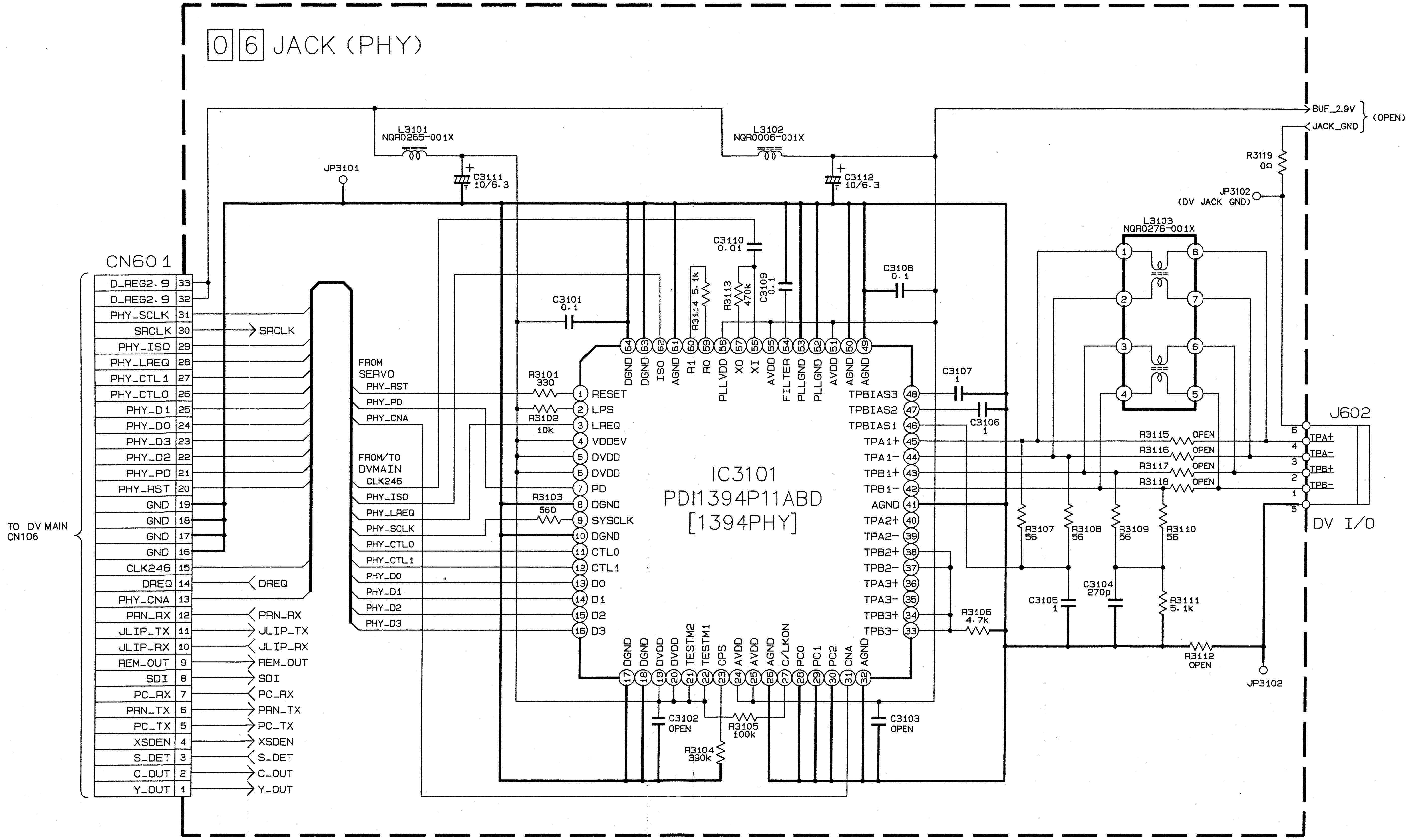

05 FRONT (W/B)
L1151
NQR0265-001X
L1101
10μ
CN501
REG_4.6V [27,28]
GND [4,5,8~10]
C1113
10/6.3
R1151
3K
Q1151
RPM-22PB
C1151
10/6.3
C1112
10/6.3
R1108
4.7k
R1107
10k
R1109
10k
C1103
0.022
R1106 1M
C1102
0.022
IC1101
TA75W01FU
VCC
VEE
R1101
33k
R1102
4.7k
R1104
1M
C1101
0.1
C1111
1
CN501
IR_OUT [29]
IR_AMP [26]
TO VIDEO OUT
CN105


05 FRONT
(IR/TALLY/EJECT)
S1801
QSW0451-001
[EJECT SW]
CN501
[27,28] REG_4.6V
[14,15] D_REG2.9
[4,5,8~10] GND
CN501
TO VIDEO OUT
CN105
[30] EJT_SW
[25] IR_RMC
[24] TALLY
R1802
47
R1801
390
TALLY LAMP
D1801
TLSU1002/LM/-X
OUT
Vcc
GND
GND
IC1801
RS-171-X
C1802
OPEN
C1801
10/6.3
Q1801
RN1116

4.19 AV/MIC/HP JACK AND JACK SCHEMATIC DIAGRAMS

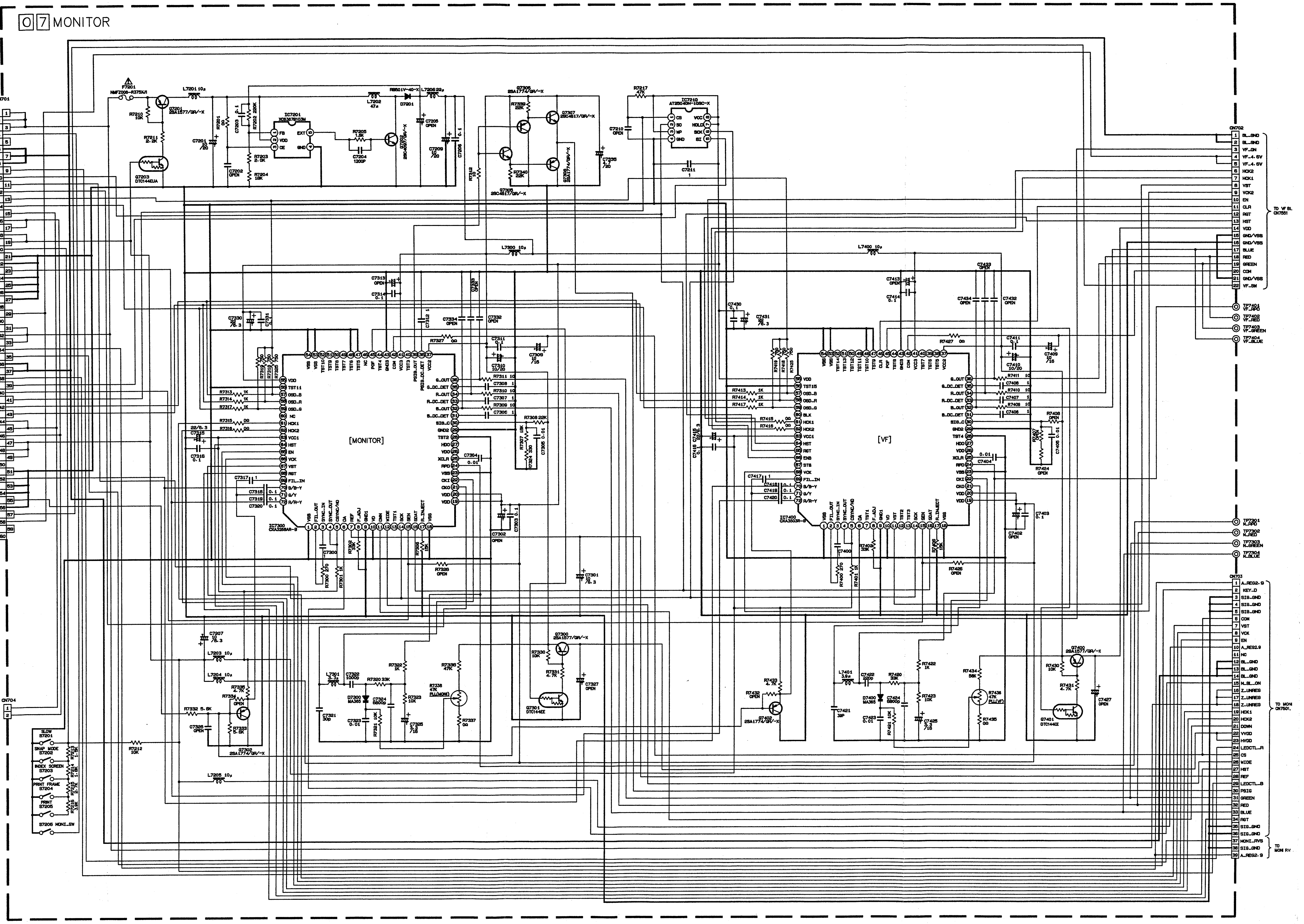

05 FRONT (AV/MIC/HP JACK)
J502
HP
D2801
OPEN
L2801
NQR0251-004X
L2802
NQR0251-004X
R2803
0Ω
R2804
0Ω
R2805
0Ω
R2806
0Ω
C2803
0.068
C2804
0.068
C2801
0.001
C2802
0.001
C2807
0.01
C2808
OPEN
C2809
OPEN
C2810
OPEN
J501
EXT MIC
JP2801
EXT MIC
GND
L2803
0Ω
L2804
0Ω
L2805
NQR0251-004X
L2806
NQR0251-004X
C2805
0.001
C2806
0.001
R2807
OPEN
R2808
OPEN
R2816
0Ω
AV
JP2802
AV/HP GND
D2802
OPEN
L2808
NQR0251-004X
L2809
NQR0251-004X
L2807
NQR0251-004X
R2811
0Ω
R2813
0Ω
R2814
0Ω
R2815
0Ω
C2813
OPEN
C2814
OPEN
C2815
OPEN
D2803
OPEN
D2804
OPEN
C2811
0.0047
C2812
0.0047
CN501
1 EX_MIC/L
16 EM_GND
2 EM_DET
17 EM_GND
3 EX_MIC/R
18 EM_GND
4 GND
19 HP_DET
5 GND
20 HP_SIG/L
6 AU_SIG/L
21 HP_SIG/R
7 AU_SIG/R
22 P_DET
8 GND
23 V_OUT
9 GND
24 TALLY
10 GND
25 IR_RMC
11 CAM_SW_A
26 IR_AMP
12 CAM_SW_B
27 REG_4.6V
13 CAM_SW_C
28 REG_4.6V
14 D_REG2.9
29 IR_OUT
15 D_REG2.9
30 EJT_SW
GND
TALLY
IR_RMC
IR_AMP
REG_4.6V
IR_OUT
D_REG2.9
EJT_SW
TO VIDEO OUT
CN105
CN502
1 NC
2 NC
3 CAM_SW_A
4 CAM_SW_B
5 CAM_SW_C
6 GND
TO
ROTARY
ENCODER SW
06 JACK (JACK)
J605
OPEN
R3766 OPEN
R3765 OPEN
R3764 OPEN
R3763 OPEN
DREQ
SRCLK
SDI
XSDEN
OPEN
D3757
OPEN
IC3751
OPEN
D3756
OPEN
D3755
OPEN
C3751
OPEN
L3751
OPEN
JACK_GND
BUF_2.9V
(OPEN)
R3762
OPEN
R3761
OPEN
CN601
PRN_TX (OPEN)
PRN_RX (OPEN)
PC_TX [5]
PC_RX [7]
JLIP_RX [10]
JLIP_TX [11]
TO PC I
CN106
J604
PC
D3754
OPEN
R3760
0Ω
R3759
0Ω
J603
EDIT/JLIP
D3753
OPEN
R3758
0Ω
CN601
REM_OUT [9]
TO DECK
CN106
R3757 220
R3756 330
D3752
DF3A6.8FE
J601
S VIDEO
JP3752
[ETC GND]
R3753
0Ω
R3751
0Ω
R3752
0Ω
CN601
C_OUT [2]
Y_OUT [1]
TO VIDEO O
CN106
CN601
S_DET [31]
TO DECK CP
CN106
D3751
DTZ6.8
JP3751
[S GND]

4.20 PHY SCHEMATIC DIAGRAM

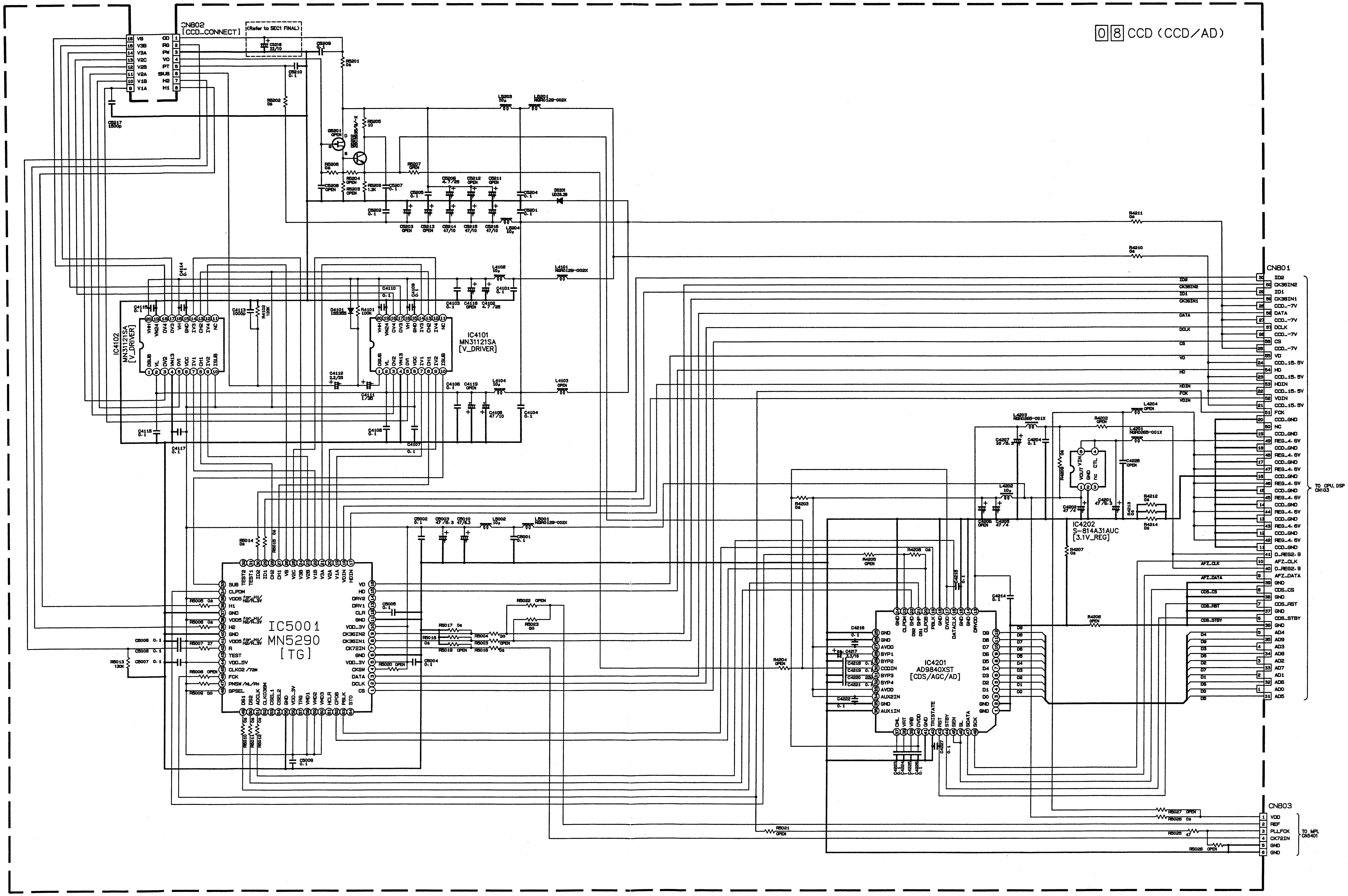


0 6 JACK (PHY)
CN601
D_REG2.9 33
D_REG2.9 32
PHY_SCLK 31
SRCLK 30
PHY_ISO 29
PHY_LREQ 28
PHY_CTL1 27
PHY_CTL0 26
PHY_D1 25
PHY_D0 24
PHY_D3 23
PHY_D2 22
PHY_PD 21
PHY_RST 20
GND 19
GND 18
GND 17
GND 16
CLK246 15
DREQ 14
PHY_CNA 13
PRN_RX 12
JLIP_TX 11
JLIP_RX 10
REM_OUT 9
SDI 8
PC_RX 7
PRN_TX 6
PC_TX 5
XSDEN 4
S_DET 3
C_OUT 2
Y_OUT 1
TO DV MAIN CN106
SRCLK
DREQ
PRN_RX
JLIP_TX
JLIP_RX
REM_OUT
SDI
PC_RX
PRN_TX
PC_TX
XSDEN
S_DET
C_OUT
Y_OUT
FROM SERVO
PHY_RST
PHY_PD
PHY_CNA
FROM/TO DVMAIN
CLK246
PHY_ISO
PHY_LREQ
PHY_SCLK
PHY_CTL0
PHY_CTL1
PHY_D0
PHY_D1
PHY_D2
PHY_D3
JP3101
L3101 NQR0265-001X
C3111 10/6.3
L3102 NQR0006-001X
C3112 10/6.3
C3110 0.01
R3114 5.1k
R3113 470k
C3109 0.1
C3108 0.1
C3101 0.1
R3101 330
R3102 10k
R3103 560
C3107 1
C3106 1
IC3101
PDI1394P11ABD
[1394PHY]
1 RESET
2 LPS
3 LREQ
4 VDD5V
5 DVDD
6 DVDD
7 PD
8 DGND
9 SYSCLK
10 DGND
11 CTL0
12 CTL1
13 D0
14 D1
15 D2
16 D3
17 DGND
18 DGND
19 DVDD
20 DVDD
21 TESTM2
22 TESTM1
23 CPS
24 AVDD
25 AVDD
26 AGND
27 C/LKON
28 PC0
29 PC1
30 PC2
31 CNA
32 AGND
33 TPB3-
34 TPB3+
35 TPA3-
36 TPA3+
37 TPB2-
38 TPB2+
39 TPA2-
40 TPA2+
41 AGND
42 TPB1-
43 TPB1+
44 TPA1-
45 TPA1+
46 TPBIAS1
47 TPBIAS2
48 TPBIAS3
49 AGND
50 AGND
51 AVDD
52 PLLGND
53 PLLGND
54 FILTER
55 AVDD
56 XI
57 XO
58 PLLVDD
59 R0
60 R1
61 AGND
62 ISO
63 DGND
64 DGND
C3102 OPEN
R3105 100k
R3104 390K
C3103 OPEN
R3106 4.7k
BUF_2.9V
JACK_GND
(OPEN)
R3119 0Ω
JP3102 (DV JACK GND)
L3103 NQR0276-001X
R3115 OPEN
R3116 OPEN
R3117 OPEN
R3118 OPEN
R3107 56
R3108 56
R3109 56
R3110 56
C3105 1
C3104 270p
R3111 5.1k
R3112 OPEN
JP3102
J602
6 TPA+
4 TPA-
3 TPB+
2 TPB-
1
5
DV I/O

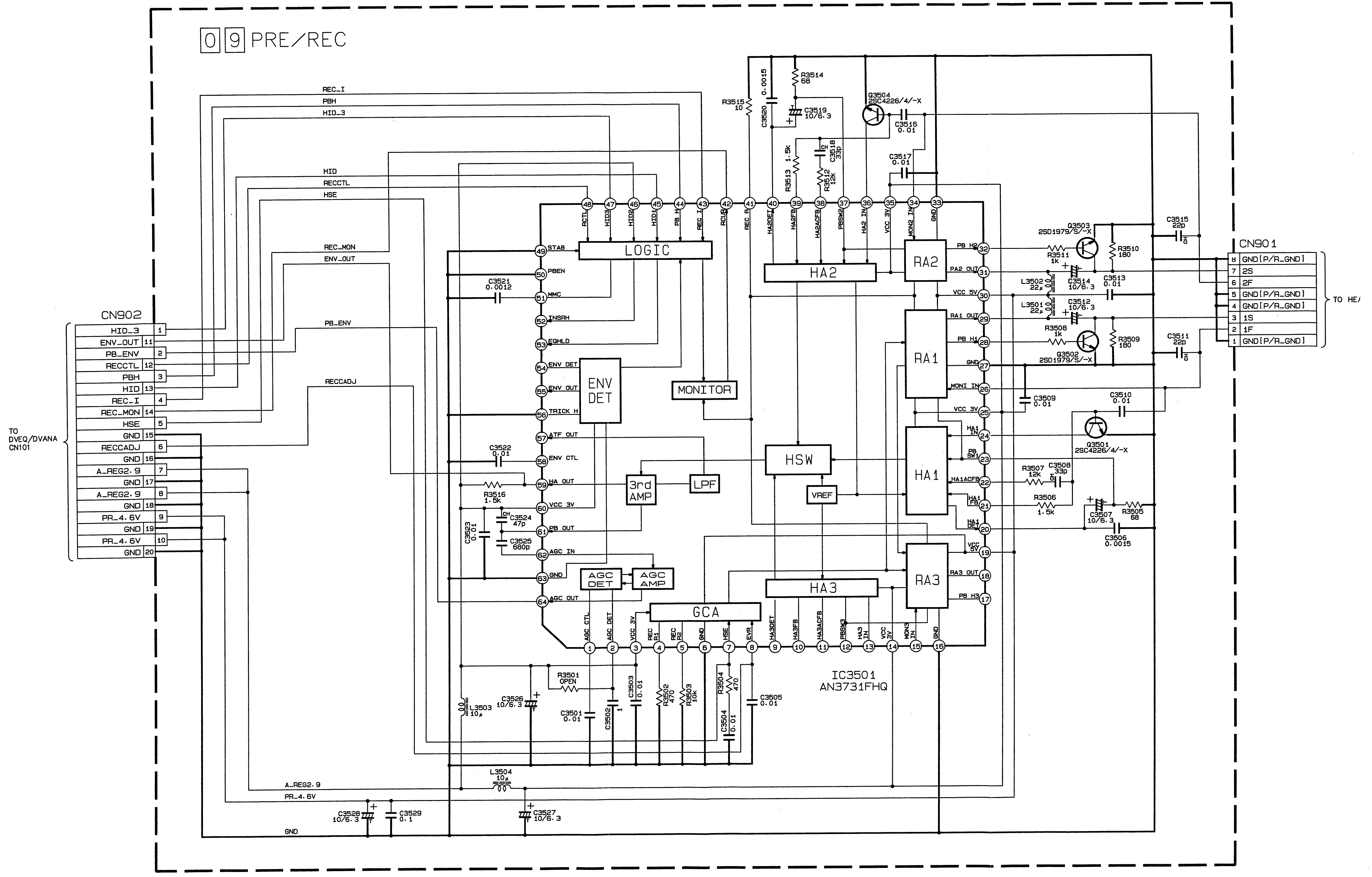
4.21 MONITOR SCHEMATIC DIAGRAM


07 MONITOR
CN701
Z_UNREG 1
Z_UNREG 2
Z_UNREG 3
MONI_SW 4
N.C. 5
BL_GND 6
BL_GND 7
BL_GND 8
LEDCTL_R 9
AU_LCD_OUT 10
AU_LCD_CLK 11
VF_CS 12
LCD_FRG 13
LCDIND_G 14
SPK+ 15
SPK- 16
SPK- 17
A_REG2.9 18
A_REG2.9 19
KEY_B 20
SIG_GND 21
SIG_GND 22
LCD_R-Y 23
SIG_GND 24
SIG_GND 25
SIG_GND 26
SIG_GND 27
N.C. 28
VF_4.6V 29
N.C. 30
Z_UNREG 31
Z_UNREG 32
Z_UNREG 33
KEY_D 34
M_RVS 35
BL_GND 36
BL_GND 37
LEDCTL_B 38
AU_LCD_IN 39
M_CS 40
ROM_CS 41
LCDIND_B 42
LCDIND_R 43
SPK+ 44
SPK+ 45
SPK- 46
A_REG2.9 47
A_REG2.9 48
A_REG2.9 49
N.C. 50
SIG_GND 51
LCD_B-Y 52
SIG_GND 53
SIG_GND 54
LCD_Y 55
SIG_GND 56
VF_SW 57
VF_4.6V 58
N.C. 59
N.C. 60
TO CPU, DECK CPU, DSP CN107
CN704
SPK+ 1
SPK- 2
TO SPEAKER
F7201 NMF2006-R375X/1
L7201 10µ
Q7201 2SA1577/QR/-X
Q7203 DTC144EUA
IC7201 XC6367B103M
L7202 47µ
D7201 RB501V-40-X
L7206 22µ
Q7202 2SC4617/QR/-X
C7204 1200P
Q7306 2SA1774/QR/-X
Q7307 2SC4617/QR/-X
Q7305 2SC4617/QR/-X
Q7308 2SA1774/QR/-X
IC7210 AT25C40N-10SC-X
CS VCC
SO HOLD
WP SCK
GND SI
L7300 10µ
L7400 10µ
[MONITOR]
IC7300 CXA3268AR-S
[VF]
IC7400 CXA3268R-S
Q7300 2SA1577/QR/-X
Q7301 DTC144EE
Q7302 2SA1774/QR/-X
L7203 10µ
L7204 10µ
L7205 10µ
L7301 3.3µ
D7300 MA365
R7338 47K PLL(MONI)
L7401 3.9µ
D7400 MA365
R7436 47K PLL(VF)
Q7402 2SA1774/QR/-X
Q7400 2SA1577/QR/-X
Q7401 DTC144EE
SLOW S7201
SNAP MODE S7202
INDEX SCREEN S7203
PRINT FRAME S7204
PRINT S7205
S7206 MONI_SW
CN702
1 BL_GND
2 BL_GND
3 VF_ON
4 VF_4.6V
5 VF_4.6V
6 HCK2
7 HCK1
8 VST
9 VCK2
10 EN
11 CLR
12 RST
13 HST
14 VDD
15 GND/VSS
16 GND/VSS
17 BLUE
18 RED
19 GREEN
20 COM
21 GND/VSS
22 VF_SW
TO VF BL CN7551
TP7401 VF_RPD
TP7402 VF_RED
TP7403 VF_GREEN
TP7404 VF_BLUE
TP7301 M_RPD
TP7302 M_RED
TP7303 M_GREEN
TP7304 M_BLUE
CN703
1 A_REG2.9
2 KEY_D
3 SIG_GND
4 SIG_GND
5 SIG_GND
6 COM
7 VST
8 VCK
9 EN
10 A_REG2.9
11 NC
12 BL_GND
13 BL_GND
14 BL_GND
15 M_BL_ON
16 Z_UNREG
17 Z_UNREG
18 Z_UNREG
19 HCK1
20 HCK2
21 DOWN
22 VVDD
23 HVDD
24 LEDCTL_R
25 CS
26 WIDE
27 HST
28 REF
29 LEDCTL_B
30 PSIG
31 GREEN
32 RED
33 BLUE
34 RGT
35 SIG_GND
36 SIG_GND
37 MONI_RVS
38 SIG_GND
39 A_REG2.9
TO MONI CN7501.
TO MONI RV

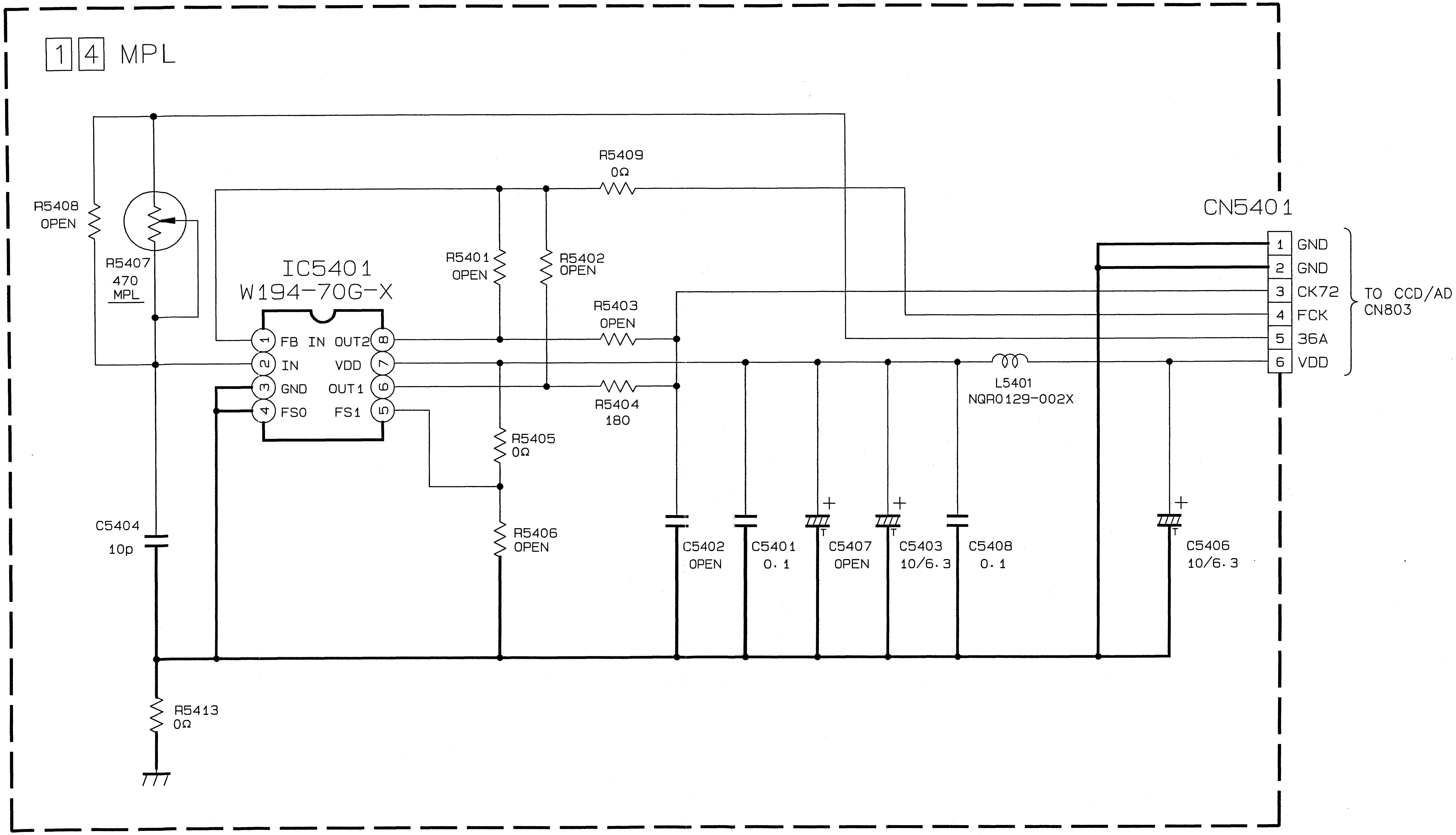
4.22 CCD/AD SCHEMATIC DIAGRAM


08 CCD (CCD/AD)
CN802 [CCD_CONNECT]
(Refer to SEC1 FINAL)
V8 V3B V3A V2C V2B V2A V1B V1A
OD RG PW VO PT SUB H2 H1
IC4102 MN31121SA [V_DRIVER]
IC4101 MN31121SA [V_DRIVER]
IC5001 MN5290 [TG]
IC4201 AD9840XST [CDS/AGC/AD]
IC4202 S-814A31AUC [3.1V_REG]
CN801
30 ID2
60 CK36IN2
29 ID1
59 CK36IN1
28 CCD_-7V
58 DATA
27 CCD_-7V
57 DCLK
26 CCD_-7V
56 CS
25 CCD_-7V
55 VD
24 CCD_15.5V
54 HD
23 CCD_15.5V
53 HDIN
22 CCD_15.5V
52 VDIN
21 CCD_15.5V
51 FCK
20 CCD_GND
50 NC
19 CCD_GND
49 REG_4.6V
18 CCD_GND
48 REG_4.6V
17 CCD_GND
47 REG_4.6V
16 CCD_GND
46 REG_4.6V
15 CCD_GND
45 REG_4.6V
14 CCD_GND
44 REG_4.6V
13 CCD_GND
43 REG_4.6V
12 CCD_GND
42 REG_4.6V
11 CCD_GND
41 D_REG2.9
10 AFZ_CLK
40 D_REG2.9
9 AFZ_DATA
39 GND
8 CDS_CS
38 GND
7 CDS_RST
37 GND
6 CDS_STBY
36 GND
5 AD4
35 AD9
4 AD3
34 AD8
3 AD2
33 AD7
2 AD1
32 AD6
1 AD0
31 AD5
TO CPU, DSP CN103
CN803
1 VDD
2 REF
3 PLLFCK
4 CK72IN
5 GND
6 GND
TO MPL CN5401

4.23 PRE/REC SCHEMATIC DIAGRAM

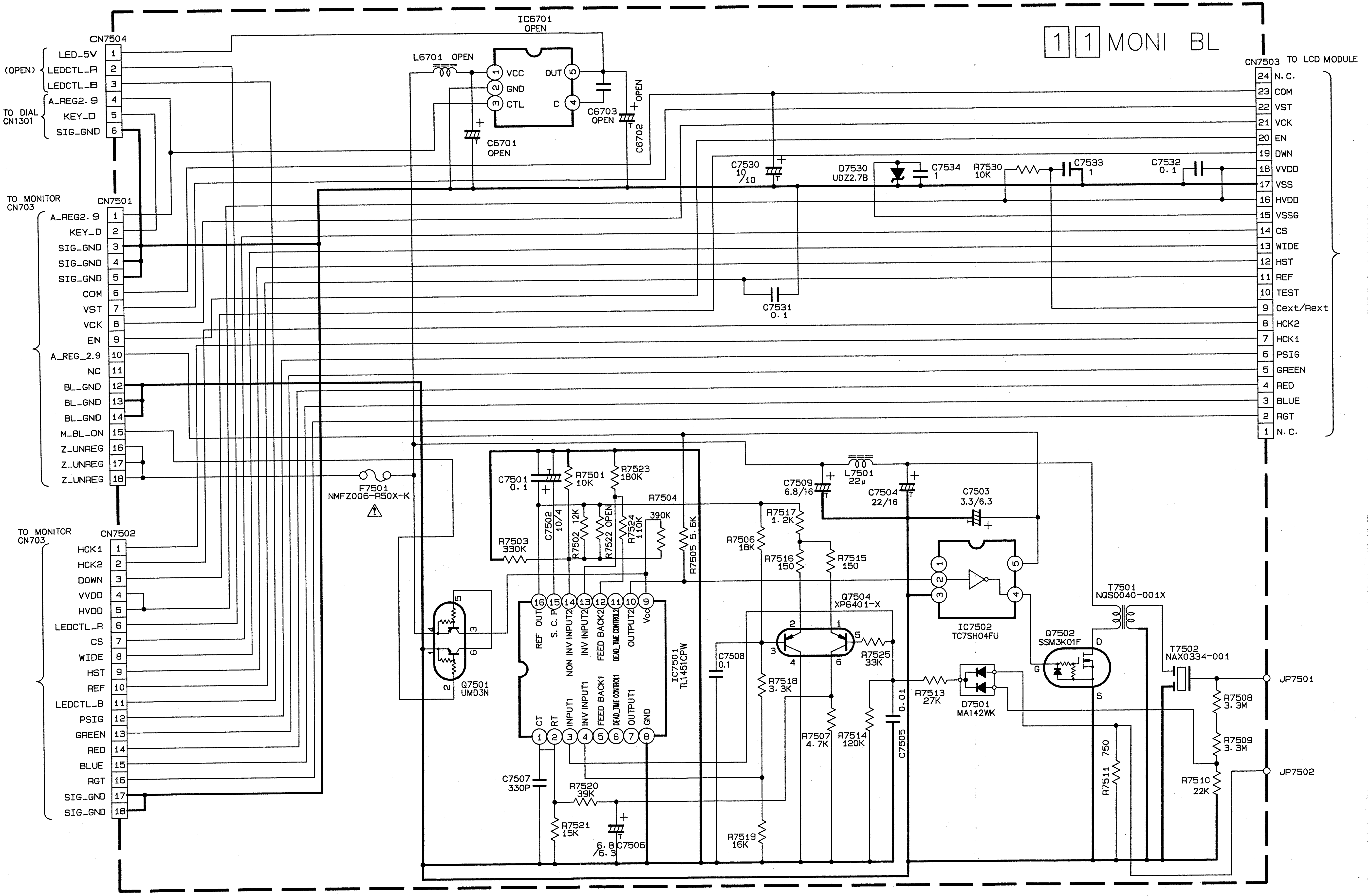

0 9 PRE/REC
CN902
HID_3 1
ENV_OUT 11
PB_ENV 2
RECCTL 12
PBH 3
HID 13
REC_I 4
REC_MON 14
HSE 5
GND 15
RECCADJ 6
GND 16
A_REG2.9 7
GND 17
A_REG2.9 8
GND 18
PR_4.6V 9
GND 19
PR_4.6V 10
GND 20
TO DVEQ/DVANA CN101
REC_I
PBH
HID_3
HID
RECCTL
HSE
REC_MON
ENV_OUT
PB_ENV
RECCADJ
LOGIC
ENV DET
MONITOR
3rd AMP
LPF
AGC DET
AGC AMP
GCA
HA2
RA2
RA1
HSW
VREF
HA1
HA3
RA3
STAB
PBEN
MMC
INSRH
EGHLD
ENV DET
ENV OUT
TRICK H
ATF OUT
ENV CTL
HA OUT
VCC 3V
PB OUT
AGC IN
GND
AGC OUT
RCTL
HID3
HID2
HID1
PB H
REC I
RCUR
REC R
HA2DET
HA2FB
HA2ACFB
PBSW2
HA2 IN
VCC 3V
MON2 IN
GND
PB H2
PA2 OUT
VCC 5V
RA1 OUT
PB H1
GND
MONI IN
VCC 3V
HA1 IN
PB SW1
HA1ACFB
HA1 FB
HA1 DET
VCC 5V
RA3 OUT
PB H3
AGC CTL
AGC DET
VCC 3V
REC R1
REC R2
GND
HSE
EVR
HA3DET
HA3FB
HA3ACFB
PBSW3
HA3 IN
VCC 3V
MON3 IN
GND
IC3501
AN3731FHQ
C3521 0.0012
C3522 0.01
R3516 1.5k
C3523 0.01
C3524 47p
C3525 680p
R3515 10
C3520 0.0015
R3514 68
C3519 10/6.3
Q3504 2SC4226/4/-X
C3516 0.01
R3513 1.5K
C3518 33p
R3512 12K
C3517 0.01
Q3503 2SD1979/S/-X
R3511 1k
R3510 180
C3515 22p
L3502 22μ
C3514 10/6.3
C3513 0.01
L3501 22μ
C3512 10/6.3
R3508 1k
R3509 180
Q3502 2SD1979/S/-X
C3511 22p
C3509 0.01
C3510 0.01
Q3501 2SC4226/4/-X
R3507 12k
C3508 33p
R3506 1.5k
C3507 10/6.3
R3505 68
C3506 0.0015
CN901
8 GND[P/R_GND]
7 2S
6 2F
5 GND[P/R_GND]
4 GND[P/R_GND]
3 1S
2 1F
1 GND[P/R_GND]
TO HE
R3501 OPEN
C3501 0.01
C3502 1
C3503 0.01
R3502 470
R3503 10k
R3504 470
C3504 0.01
C3505 0.01
L3503 10μ
C3526 10/6.3
L3504 10μ
A_REG2.9
PR_4.6V
GND
C3528 10/6.3
C3529 0.1
C3527 10/6.3

4.24 MPL SCHEMATIC DIAGRAM

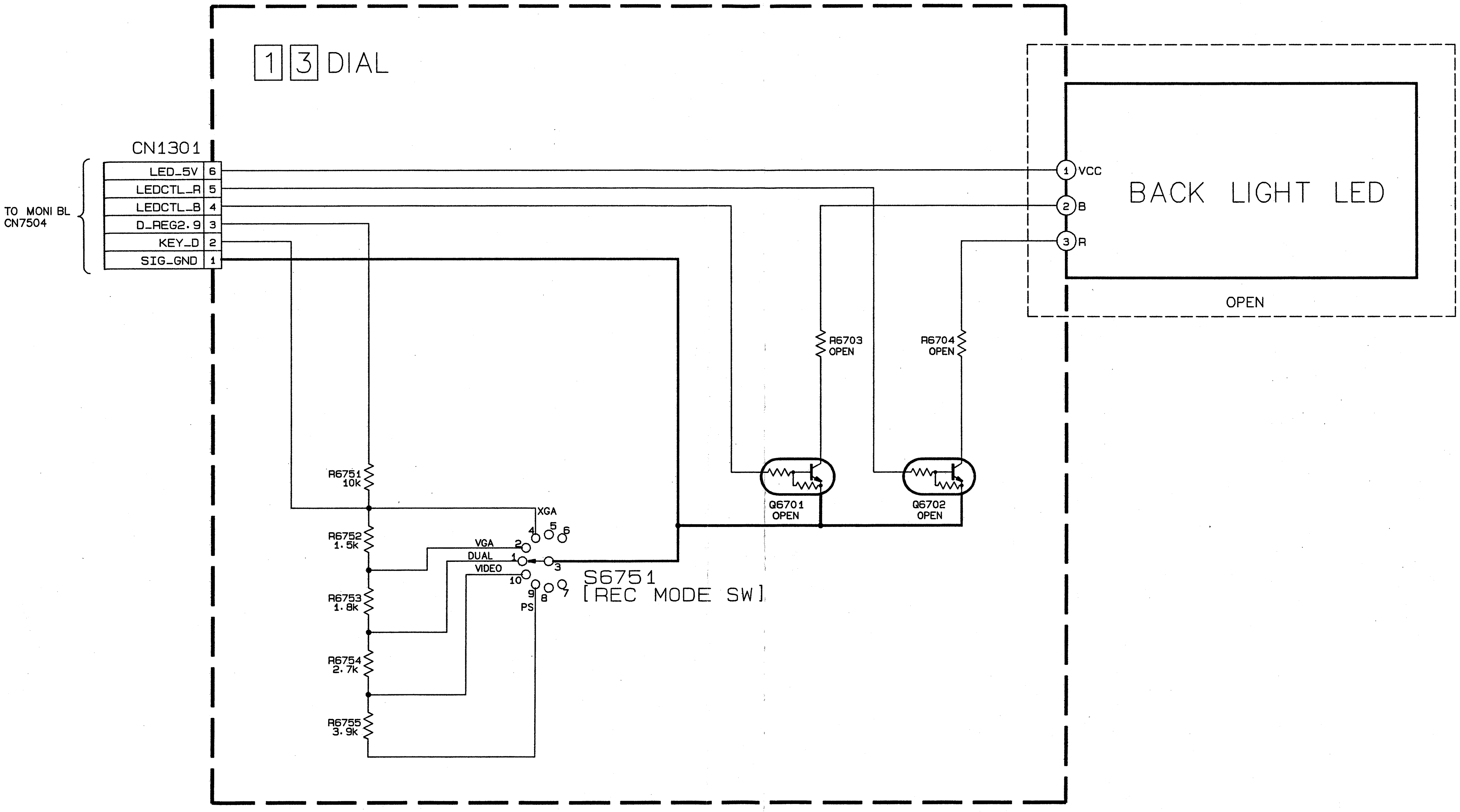


1 4 MPL
R5408
OPEN
R5407
470
MPL
IC5401
W194-70G-X
1 FB
2 IN
3 GND
4 FS0
IN OUT2 8
VDD 7
OUT1 6
FS1 5
R5409
0Ω
R5401
OPEN
R5402
OPEN
R5403
OPEN
R5404
180
R5405
0Ω
R5406
OPEN
C5404
10p
R5413
0Ω
C5402
OPEN
C5401
0.1
C5407
OPEN
C5403
10/6.3
C5408
0.1
C5406
10/6.3
L5401
NQR0129-002X
CN5401
1 GND
2 GND
3 CK72
4 FCK
5 36A
6 VDD
TO CCD/AD
CN803

4.25 MONITOR BL SCHEMATIC DIAGRAM

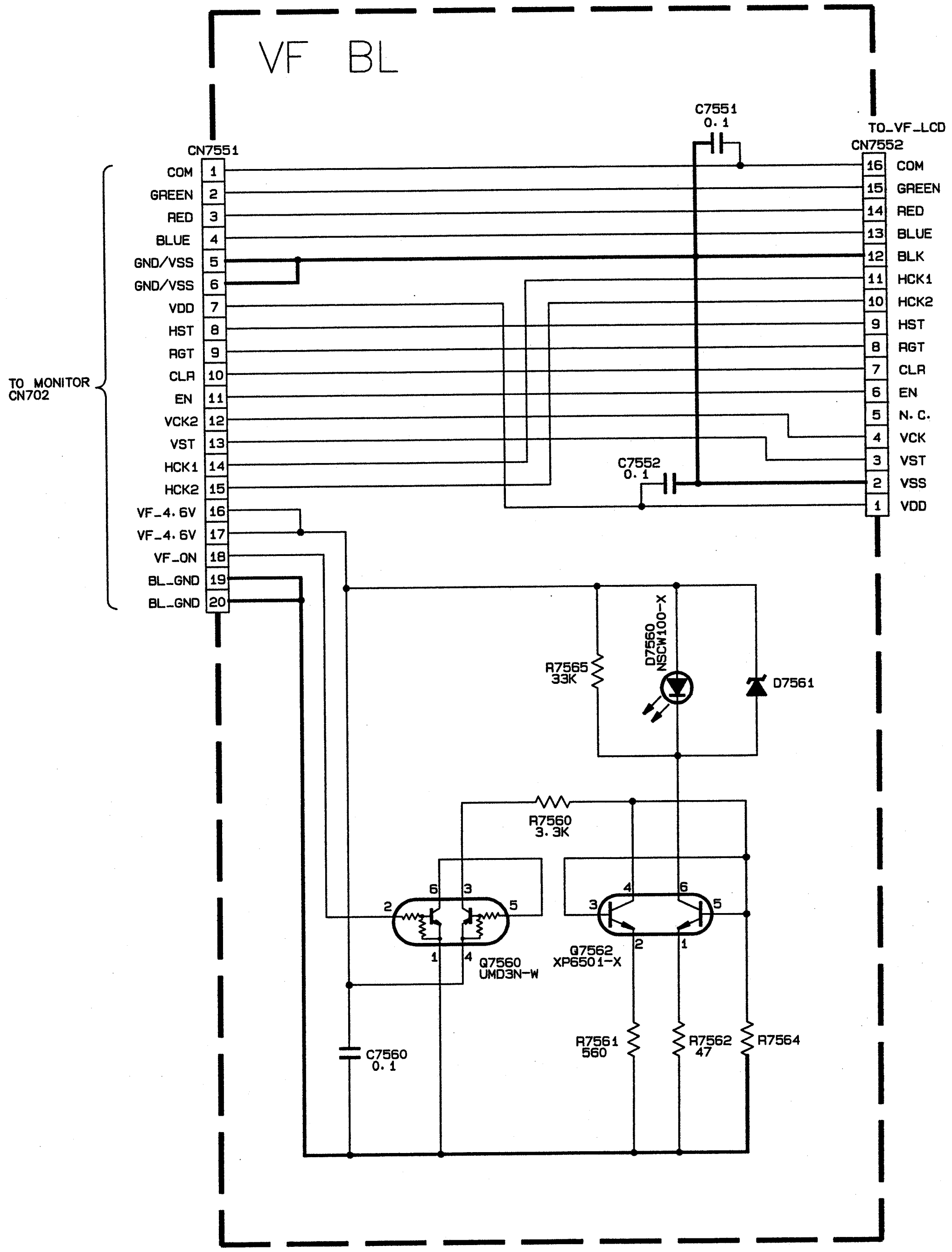

1 1 MONI BL
CN7504
LED_5V
LEDCTL_R
LEDCTL_B
(OPEN)
A_REG2.9
KEY_D
SIG_GND
TO DIAL CN1301
IC6701 OPEN
L6701 OPEN
VCC
GND
CTL
OUT
C
C6703 OPEN
C6702 OPEN
C6701 OPEN
CN7503 TO LCD MODULE
24 N.C.
23 COM
22 VST
21 VCK
20 EN
19 DWN
18 VVDD
17 VSS
16 HVDD
15 VSSG
14 CS
13 WIDE
12 HST
11 REF
10 TEST
9 Cext/Rext
8 HCK2
7 HCK1
6 PSIG
5 GREEN
4 RED
3 BLUE
2 RGT
1 N.C.
C7530 10/10
D7530 UDZ2.7B
C7534 1
R7530 10K
C7533 1
C7532 0.1
C7531 0.1
TO MONITOR CN703
CN7501
1 A_REG2.9
2 KEY_D
3 SIG_GND
4 SIG_GND
5 SIG_GND
6 COM
7 VST
8 VCK
9 EN
10 A_REG_2.9
11 NC
12 BL_GND
13 BL_GND
14 BL_GND
15 M_BL_ON
16 Z_UNREG
17 Z_UNREG
18 Z_UNREG
F7501 NMFZ006-R50X-K
TO MONITOR CN703
CN7502
1 HCK1
2 HCK2
3 DOWN
4 VVDD
5 HVDD
6 LEDCTL_R
7 CS
8 WIDE
9 HST
10 REF
11 LEDCTL_B
12 PSIG
13 GREEN
14 RED
15 BLUE
16 RGT
17 SIG_GND
18 SIG_GND
Q7501 UMD3N
C7501 0.1
R7501 10K
R7523 180K
R7504
390K
R7503 330K
C7502 10/4
R7502 12K
R7522 OPEN
R7524 110K
R7505 5.6K
REF OUT
S.C.P
NON INV INPUT2
INV INPUT2
FEED BACK2
DEAD_TIME CONTROL2
OUTPUT2
Vcc
CT
RT
INPUT1
INV INPUT1
FEED BACK1
DEAD_TIME CONTROL1
OUTPUT1
GND
IC7501 TL1451CPW
C7507 330P
R7520 39K
R7521 15K
C7506 6.8/6.3
C7508 0.1
R7506 18K
R7517 1.2K
R7516 150
R7515 150
R7518 3.3K
R7519 16K
R7507 4.7K
R7514 120K
Q7504 XP6401-X
R7525 33K
C7509 6.8/16
L7501 22μ
C7504 22/16
C7503 3.3/6.3
IC7502 TC7SH04FU
C7505 0.01
R7513 27K
D7501 MA142WK
Q7502 SSM3K01F
D
G
S
T7501 NQS0040-001X
T7502 NAX0334-001
R7511 750
R7508 3.3M
R7509 3.3M
R7510 22K
JP7501
JP7502

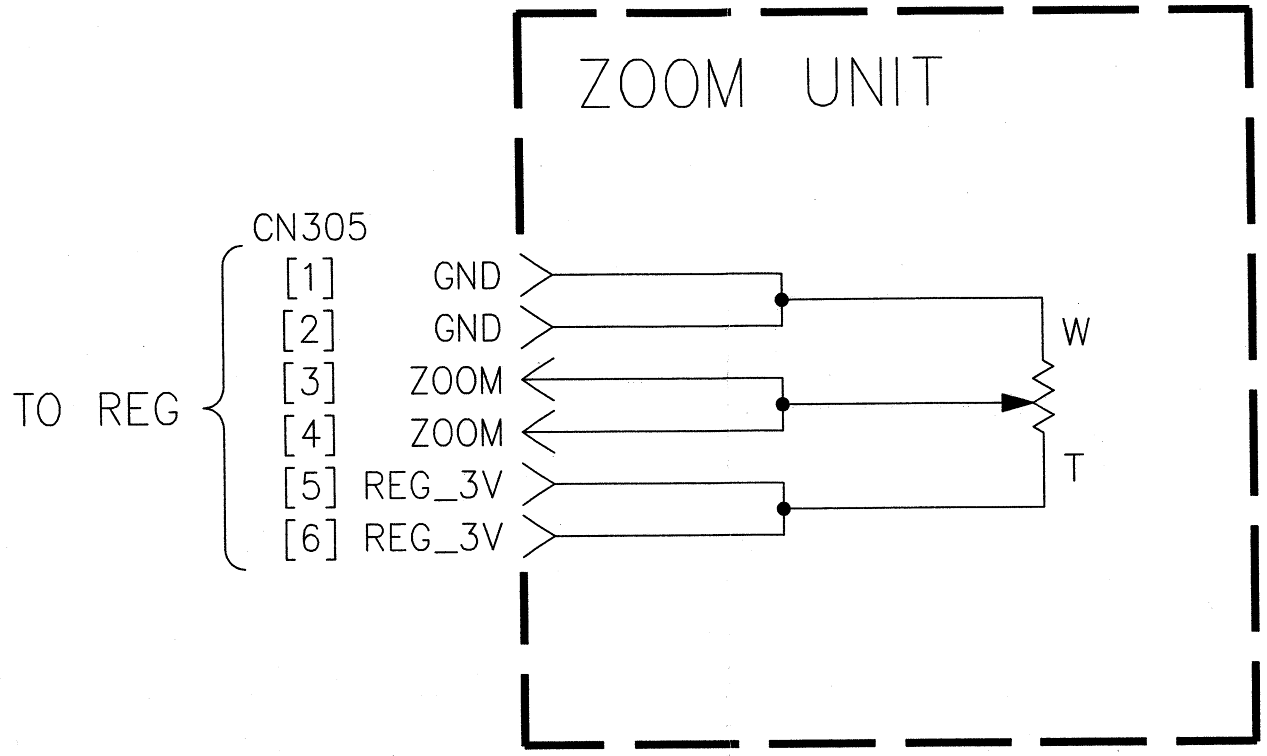
4.26 DIAL SCHEMATIC DIAGRAM

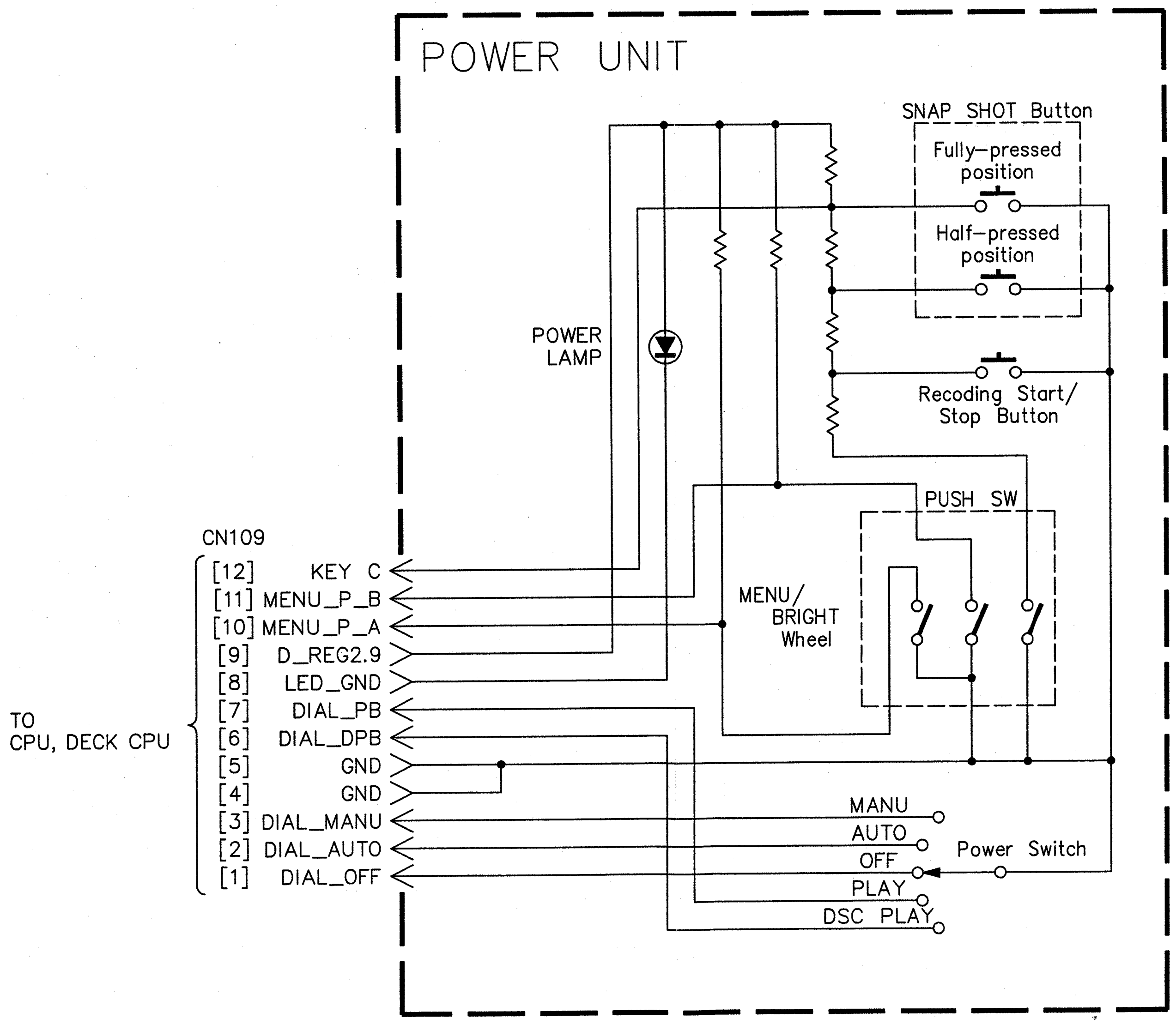


13 DIAL
CN1301
TO MONI BL CN7504
LED_5V 6
LEDCTL_R 5
LEDCTL_B 4
D_REG2.9 3
KEY_D 2
SIG_GND 1
BACK LIGHT LED
1 VCC
2 B
3 R
OPEN
R6703 OPEN
R6704 OPEN
Q6701 OPEN
Q6702 OPEN
R6751 10k
R6752 1.5k
R6753 1.8k
R6754 2.7k
R6755 3.9k
XGA
VGA
DUAL
VIDEO
PS
1
2
3
4
5
6
7
8
9
10
S6751
[REC MODE SW]

4.27 VF BL, ZOOM UNIT AND POWER UNIT SCHEMATIC DIAGRAMS

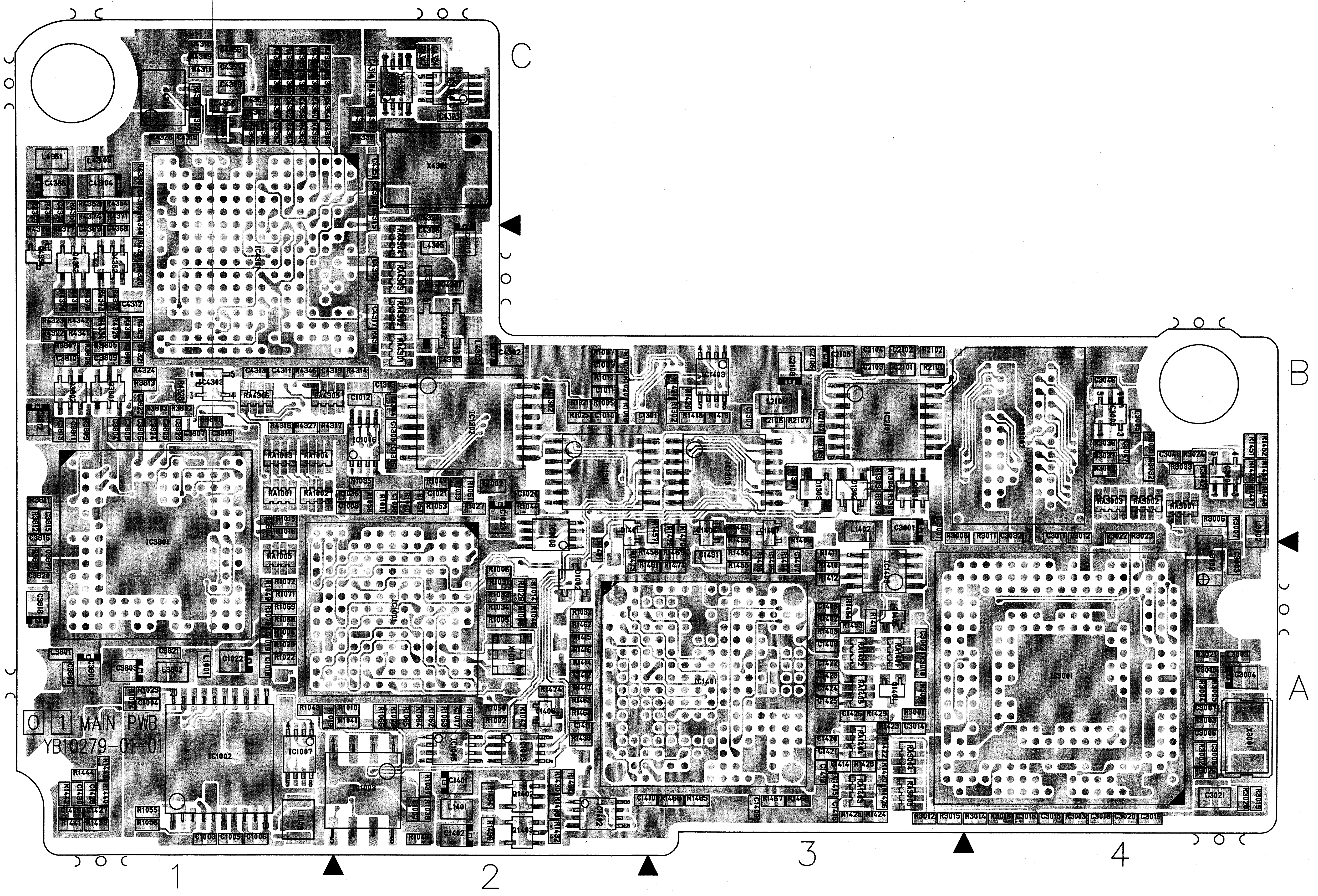

VF BL
TO MONITOR CN702
CN7551
COM 1
GREEN 2
RED 3
BLUE 4
GND/VSS 5
GND/VSS 6
VDD 7
HST 8
RGT 9
CLR 10
EN 11
VCK2 12
VST 13
HCK1 14
HCK2 15
VF_4.6V 16
VF_4.6V 17
VF_ON 18
BL_GND 19
BL_GND 20
C7551 0.1
TO_VF_LCD
CN7552
16 COM
15 GREEN
14 RED
13 BLUE
12 BLK
11 HCK1
10 HCK2
9 HST
8 RGT
7 CLR
6 EN
5 N.C.
4 VCK
3 VST
2 VSS
1 VDD
C7552 0.1
R7565 33K
D7560 NSCW100-X
D7561
R7560 3.3K
Q7560 UMD3N-W
Q7562 XP6501-X
C7560 0.1
R7561 560
R7562 47
R7564


ZOOM UNIT
CN305
TO REG
[1] GND
[2] GND
[3] ZOOM
[4] ZOOM
[5] REG_3V
[6] REG_3V
W
T


POWER UNIT
SNAP SHOT Button
Fully-pressed position
Half-pressed position
POWER LAMP
Recoding Start/ Stop Button
PUSH SW
MENU/ BRIGHT Wheel
CN109
TO CPU, DECK CPU
[12] KEY C
[11] MENU_P_B
[10] MENU_P_A
[9] D_REG2.9
[8] LED_GND
[7] DIAL_PB
[6] DIAL_DPB
[5] GND
[4] GND
[3] DIAL_MANU
[2] DIAL_AUTO
[1] DIAL_OFF
MANU
AUTO
OFF
PLAY
DSC PLAY
Power Switch

4.28 MAIN CIRCUIT BOARD

FOIL SIDE (B)


C
B
A
1
2
3
4
0 1 MAIN PWB
YB10279-01-01
IC4301
X4301
IC3801
IC1001
IC1401
IC3001
IC1002
IC1003
IC1007
IC1301
IC1302
IC1303
IC2101
IC3002
IC1006
IC1008
IC1009
IC1005
IC1403
IC1402
X1001
X3001
L4301
L4303
L2101
L1401
L1402
L1003
L3801
L3802
C4365
C4304
C4302
C3801
C3803
C1022
C1401
C1402
C3004
C3021

COMPONENT PARTS LOCATION GUIDE (MAIN)

REF.No.	LOCATION		
CAPACITOR			
C1003	B	C	1A
C1004	B	C	1A
C1005	B	C	1A
C1006	B	C	1A
C1007	B	C	2A
C1008	B	C	2B
C1009	B	C	2B
C1010	B	C	2B
C1011	B	C	2B
C1012	B	C	2B
C1013	A	C	2C
C1014	A	C	2C
C1015	A	C	2C
C1016	B	C	1A
C1017	B	C	2A
C1018	B	C	2B
C1019	B	C	1A
C1020	B	C	2B
C1021	B	C	2B
C1022	B	C	1A
C1023	B	C	2B
C1301	B	C	2B
C1302	B	C	2B
C1303	B	C	2B
C1304	B	C	2B
C1305	B	C	2B
C1306	B	C	2B
C1307	B	C	3B
C1401	B	C	2A
C1402	B	C	2A
C1405	B	C	3A
C1406	B	C	3A
C1407	B	C	3A
C1408	B	C	3A
C1409	B	C	3A
C1410	B	C	2A
C1411	B	C	2A
C1412	B	C	2A
C1413	B	C	3A
C1414	B	C	3A
C1415	B	C	3A
C1416	B	C	3A
C1420	B	C	3A
C1421	B	C	3A
C1422	B	C	3A
C1423	B	C	3A
C1424	B	C	3A
C1425	B	C	3A
C1426	B	C	3A
C1427	B	C	1A
C1428	B	C	1A
C1429	B	C	1A
C1430	B	C	1A
C1431	B	C	3A
C2101	B	C	3B
C2102	B	C	3B
C2103	B	C	3B
C2104	B	C	3B
C2105	B	C	3B
C2106	B	C	3B
C2107	B	C	3B
C2108	B	C	3B
C3001	B	C	3A
C3002	B	C	4A
C3003	B	C	4A
C3004	B	C	4A
C3005	B	C	4A
C3006	B	C	4A
C3007	B	C	4A
C3010	B	C	4A
C3011	B	C	4A
C3012	B	C	4A
C3013	B	C	3A
C3014	B	C	3A
C3015	B	C	4A
C3016	B	C	4A
C3017	A	C	2A
C3018	B	C	4A
C3019	B	C	4A
C3020	B	C	4A
C3021	B	C	4A
C3032	B	C	4A
C3041	B	C	4B
C3042	B	C	4B
C3046	B	C	4B
C3047	B	C	4B
C3201	A	C	1A
C3202	A	C	1A
C3203	A	C	1A
C3204	A	C	1A
C3205	A	C	1B
C3206	A	C	1B
C3207	A	C	2A
C3208	A	C	2A
C3209	A	C	1A
C3210	A	C	1A
C3211	A	C	1B
C3212	A	C	2B
C3213	A	C	1A
C3214	A	C	1B
C3215	A	C	1B
C3216	A	C	2A
C3217	A	C	1A
C3218	A	C	2A
C3221	A	C	2B
C3222	A	C	2B
C3301	A	C	3A
C3302	A	C	2A
C3303	A	C	2B
C3304	A	C	3B
C3305	A	C	2A
C3306	A	C	2A
C3307	A	C	2B
C3308	A	C	2B
C3309	A	C	2B
C3310	A	C	2B
C3311	A	C	2B
C3312	A	C	2B
C3313	A	C	2B
C3314	A	C	3B
C3315	A	C	3B
C3316	A	C	3B
C3317	A	C	3A
C3318	A	C	3A
C3319	A	C	3A
C3320	A	C	3A
C3321	A	C	3A
C3322	A	C	2A
C3323	A	C	2A
C3324	A	C	2A
C3325	A	C	2A
C3326	A	C	2A
C3327	A	C	2A
C3328	A	C	2A
C3329	A	C	2A
C3330	A	C	2A
C3331	A	C	2A
C3332	A	C	2A
C3341	A	C	2B
C3342	A	C	2B
C3343	A	C	2B
C3401	A	C	2B
C3402	A	C	1B
C3551	A	C	2A
C3552	A	C	2A
C3702	A	C	4B
C3703	A	C	4B
C3704	A	C	4B
C3705	A	C	4A
C3706	A	C	4A
C3707	A	C	4A
C3708	A	C	4A
C3709	A	C	4A
C3710	A	C	4A
C3711	A	C	4A
C3712	A	C	4A
C3713	A	C	4A
C3714	A	C	4B
C3715	A	C	4A
C3716	A	C	4A
C3717	A	C	4A
C3721	A	C	4B
C3722	A	C	4B
C3723	A	C	4B
C3724	A	C	4B
C3731	A	C	4B
C3732	A	C	4B
C3733	A	C	4B
C3734	A	C	4B
C3735	A	C	4B
C3736	A	C	4B
C3801	B	C	1A
C3802	B	C	1A
C3803	B	C	1A
C3804	B	C	1B
C3805	B	C	1B
C3806	B	C	1B
C3807	B	C	1B
C3808	B	C	1B
C3809	B	C	1B
C3810	B	C	1B
C3811	B	C	1B
C3812	B	C	1B
C3813	B	C	1B
C3815	B	C	1B
C3816	B	C	1A
C3817	B	C	1A
C3818	B	C	1A
C3819	B	C	1B
C3820	B	C	1A
C3821	B	C	1A
C3822	B	C	1B
C3823	B	C	1B
C3824	B	C	1B
C3851	A	C	3A
C3852	A	C	3A
C3853	A	C	3A
C3854	A	C	3A
C3855	A	C	3A
C3856	A	C	4A
C3857	A	C	3A
C3858	A	C	3A
C3859	A	C	3B
C3860	A	C	3B
C3861	A	C	3B
C3862	A	C	3A
C4281	A	C	1B
C4282	A	C	1B
C4283	A	C	1C
C4284	A	C	1C
C4285	A	C	1C
C4286	A	C	1C
C4287	A	C	1C
C4288	A	C	2B
C4301	B	C	2B
C4302	B	C	2B
C4303	B	C	2B
C4304	B	C	1C
C4307	B	C	2B
C4308	B	C	2B
C4309	B	C	2C
C4310	B	C	1C
C4311	B	C	1B
C4312	B	C	1B
C4313	B	C	1B
C4314	B	C	2C
C4315	B	C	2B
C4316	B	C	1C
C4317	B	C	2B
C4318	B	C	1C
C4319	B	C	1B
C4320	B	C	2B
C4321	B	C	1B
C4323	B	C	2C
C4324	B	C	2C
C4351	B	C	2C
C4352	B	C	1C
C4353	B	C	1C
C4354	B	C	1C
C4355	B	C	1C
C4357	B	C	1C
C4358	B	C	1C
C4359	B	C	1C
C4360	B	C	1C
C4361	B	C	1C
C4362	B	C	1C
C4363	B	C	1C
C4364	B	C	1C
C4365	B	C	1C
C4368	B	C	1B
C4369	B	C	1B
C4370	B	C	1B
C6001	A	C	1A
C6002	A	C	1A
C6003	A	C	1B
C6004	A	C	1A
C6005	A	C	1B
C6006	A	C	1B
C6007	A	C	1B
C6008	A	C	1B
C6009	A	C	1A
CONNECTOR			
CN101	A	C	2A
CN102	A	C	2A
CN103	A	C	1B
CN104	A	C	4B
CN105	A	C	4B
CN106	A	C	4A
CN107	A	C	3A
CN108	A	C	1A
CN109	A	C	1B
DIODE			
D1002	B	C	2A
D1302	B	C	3B
D1303	B	C	3B
D1401	B	C	2A
D3701	A	C	4A
D6001	A	C	1A
D6002	A	C	1B
IC			
IC1001	B	C	2A
IC1002	B	C	1A
IC1003	B	C	2A
IC1004	A	C	2C
IC1005	B	C	2A
IC1006	B	C	2B
IC1007	B	C	1A
IC1008	B	C	2A
IC1009	B	C	2A
IC1301	B	C	2B
IC1302	B	C	2B
IC1303	B	C	3B
IC1401	B	C	3A
IC1402	B	C	2A
IC1403	B	C	3B
IC1405	B	C	3A
IC2101	B	C	3B
IC3001	B	C	4A
IC3002	B	C	4B
IC3004	B	C	4B
IC3005	B	C	4B
IC3201	A	C	1A
IC3202	A	C	2B
IC3203	A	C	2A
IC3301	A	C	2A
IC3302	A	C	2B
IC3401	A	C	1B
IC3701	A	C	4A
IC3702	A	C	4B
IC3801	B	C	1A
IC3851	A	C	3A
IC4301	B	C	1B
IC4302	B	C	2B
IC4303	B	C	1B
IC4304	B	C	2C
IC4305	B	C	2C
IC6001	A	C	1A
IC6002	A	C	1B
IC6003	A	C	1B
IC6004	A	C	1B
COIL			
L1001	B	C	1A
L1002	B	C	2B
L1003	B	C	1A
L1401	B	C	2A
L1402	B	C	3A
L2101	B	C	3B
L3001	B	C	3A
L3002	B	C	4A
L3003	B	C	4A
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L4303	B	C	1C
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L4351	B	C	1C
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Q1402	B	C	2A
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Q1405	B	C	3A
Q1406	B	C	3A
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Q6006	A	C	1B
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R1029	B	C	1A	R1450	B	C	4B	R3320	A	C	2B	R3865	A	C	3B	R4381	B	C	1C
R1031	B	C	2A	R1451	B	C	4B	R3321	A	C	3B	R3866	A	C	3B	R4382	B	C	1C
R1032	B	C	2A	R1452	B	C	4B	R3322	A	C	3B	R3867	A	C	3A	R6001	A	C	1A
R1033	B	C	2A	R1453	B	C	3A	R3323	A	C	3B	R3868	A	C	3B	R6002	A	C	1A
R1034	B	C	2A	R1454	B	C	3A	R3324	A	C	3B	R3869	A	C	3B	R6003	A	C	1A
R1035	B	C	2B	R1455	B	C	3A	R3325	A	C	3B	R3870	A	C	3A	R6004	A	C	1A
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R1037	B	C	2A	R1457	B	C	3A	R3327	A	C	3B	R3872	A	C	3A	R6006	A	C	1A
R1038	B	C	2A	R1458	B	C	2A	R3328	A	C	3B	R3873	A	C	3A	R6007	A	C	1A
R1040	B	C	2B	R1459	B	C	3A	R3329	A	C	3A	R3874	A	C	3B	R6008	A	C	1A
R1041	B	C	2A	R1460	B	C	3A	R3330	A	C	3A	R4301	B	C	1C	R6009	A	C	1B
R1042	B	C	2A	R1461	B	C	2A	R3331	A	C	3A	R4302	B	C	1C	R6010	A	C	1B
R1043	B	C	1A	R1462	B	C	2A	R3332	A	C	3A	R4303	A	C	2C	R6011	A	C	1B
R1044	B	C	2B	R1463	B	C	2A	R3333	A	C	3A	R4304	A	C	2C	R6012	A	C	1A
R1045	A	C	2C	R1464	B	C	2A	R3334	A	C	3A	R4305	A	C	2C	R6013	A	C	1A
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R1047	B	C	2B	R1466	B	C	3A	R3336	A	C	3A	R4308	A	C	2C	R6018	A	C	1A
R1048	B	C	2A	R1467	B	C	3A	R3337	A	C	3A	R4309	B	C	1C	RA1001	B	C	1B
R1049	B	C	1A	R1468	B	C	3A	R3338	A	C	3A	R4310	B	C	1C	RA1002	B	C	1B
R1050	B	C	2A	R1469	B	C	3A	R3339	A	C	3A	R4311	B	C	1C	RA1003	B	C	1B
R1051	B	C	2B	R1470	B	C	3A	R3340	A	C	3A	R4312	B	C	2C	RA1004	B	C	1B
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R1053	B	C	2B	R1472	B	C	3A	R3342	A	C	3A	R4314	B	C	2B	RA1401	B	C	3A
R1055	B	C	1A	R1473	B	C	2A	R3343	A	C	3A	R4315	B	C	1B	RA1402	B	C	3A
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R1061	B	C	2B	R2102	B	C	3B	R3350	A	C	2A	R4318	A	C	1B	RA1405	B	C	3A
R1062	B	C	2A	R2103	B	C	3B	R3351	A	C	2A	R4319	B	C	2C	RA3001	B	C	4B
R1063	B	C	2A	R2106	B	C	3B	R3352	A	C	2A	R4320	B	C	1B	RA3002	B	C	4B
R1064	B	C	2A	R2107	B	C	3B	R3353	A	C	2A	R4321	B	C	1B	RA3003	B	C	4B
R1065	B	C	2A	R3001	B	C	3A	R3361	A	C	2B	R4322	B	C	1B	RA3004	B	C	3A
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R1068	B	C	1A	R3003	B	C	4A	R3551	A	C	2A	R4324	B	C	1B	RA4301	B	C	2B
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R1072	B	C	1A	R3007	B	C	4A	R3701	A	C	4B	R4328	B	C	1C	RA4305	B	C	1B
R1301	B	C	3B	R3008	B	C	3A	R3702	A	C	4B	R4329	A	C	1B	RA4306	B	C	1B
R1302	B	C	3B	R3009	B	C	4B	R3703	A	C	4A	R4330	A	C	1B	RA4307	A	C	1B
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R1307	B	C	3B	R3012	B	C	3A	R3706	A	C	4A	R4333	A	C	1C	FL3851	A	C	3A
R1308	B	C	3B	R3013	B	C	4A	R3707	A	C	4A	R4334	B	C	1B	FL3852	A	C	3B
R1401	B	C	2A	R3014	B	C	4A	R3708	A	C	4A	R4335	B	C	1B	JP3201	B	C	1A
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R1403	B	C	3A	R3016	B	C	4A	R3711	A	C	4A	R4337	A	C	2C	TH3301	A	C	2B
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R1408	B	C	3A	R3018	B	C	3A	R3715	A	C	4A	R4339	B	C	2C	X1001	B	C	2A
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R1413	B	C	3A	R3023	B	C	4A	R3720	A	C	4A	R4344	A	C	1C				
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R1427	B	C	3A	R3211	A	C	2B	R3808	B	C	1B	R4361	B	C	1C				
R1428	B	C	3A	R3212	A	C	2B	R3809	B	C	1B	R4362	B	C	1C				
R1429	B	C	3A	R3301	A	C	2B	R3810	B	C	1A	R4363	B	C	1C				
R1430	B	C	2A	R3302	A	C	2B	R3811	B	C	1B	R4364	B	C	1C				
R1431	B	C	2A	R3303	A	C	2B	R3812	B	C	1B	R4365	B	C	1C				
R1432	B	C	2A	R3305	A	C	2A	R3813	B	C	1B	R4366	B	C	1C				
R1433	B	C	2A	R3306	A	C	2A	R3851	A	C	3A	R4367	B	C	1C				
R1434	B	C	2A	R3308	A	C	2A	R3852	A	C	3A	R4368	B	C	1C				
R1436	B	C	2A	R3309	A	C	2A	R3853	A	C	3A	R4369	B	C	1B				
R1438	B	C	2A	R3310	A	C	2A	R3854	A	C	3A	R4370	B	C	1B				
R1439	B	C	1A	R3311	A	C	2B	R3855	A	C	3A	R4371	B	C	1B				
R1440	B	C	1A	R3312	A	C	2A	R3856	A	C	3A	R4372	B	C	1B				
R1441	B	C	1A	R3313	A	C	2A	R3857	A	C	3A	R4373	B	C	1B				
R1442	B	C	1A	R3314	A	C	2B	R3858	A	C	3A	R4374	B	C	1B				
R1443	B	C	1A	R3315	A	C	2B	R3859	A	C	3A	R4375	B	C	1B				
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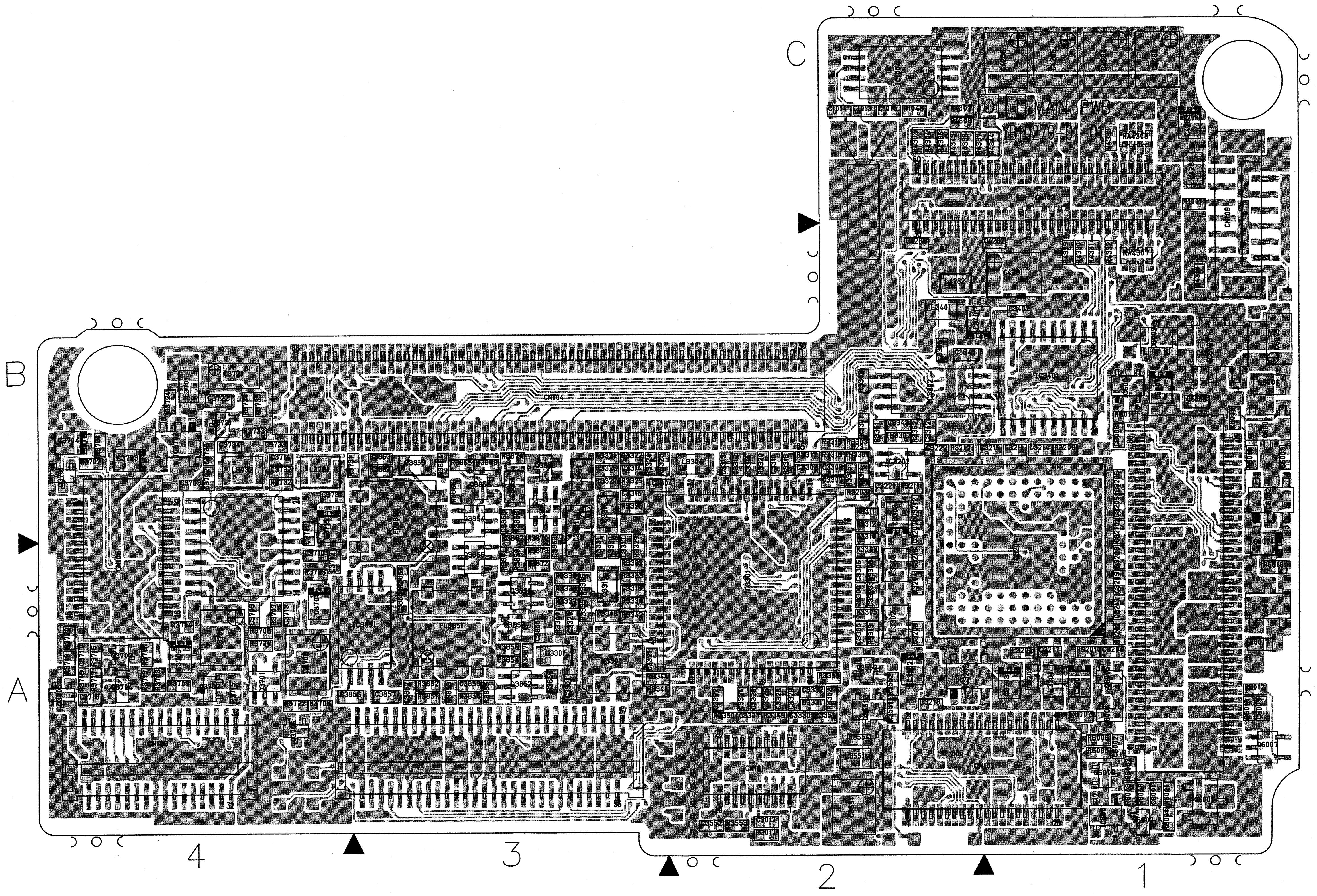
COMPONENT SIDE (A)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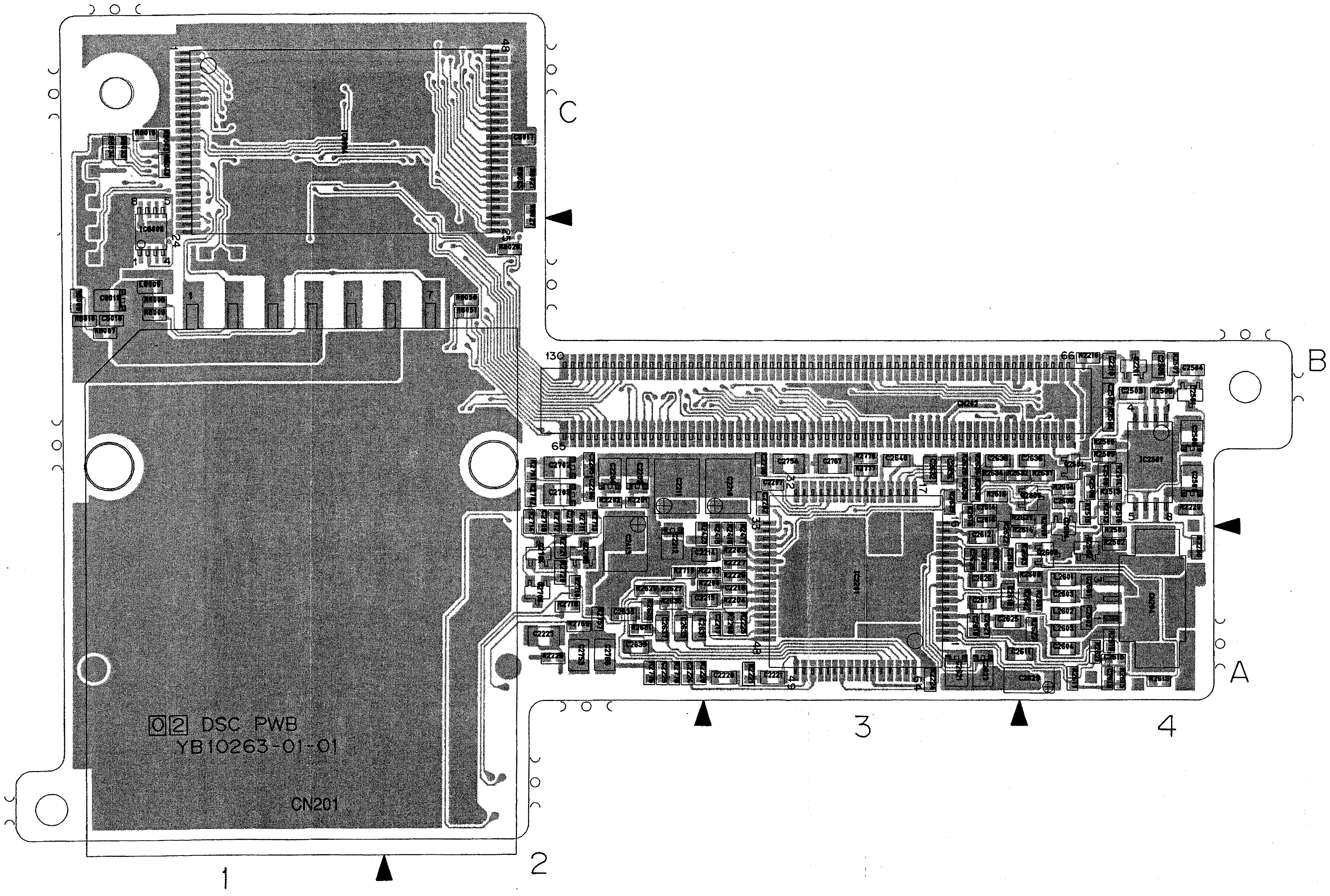
4.29 DSC CIRCUIT BOARD

FOIL SIDE (B)



COMPONENT PARTS LOCATIONGUIDE (DSC)

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C1204	A	C	3A
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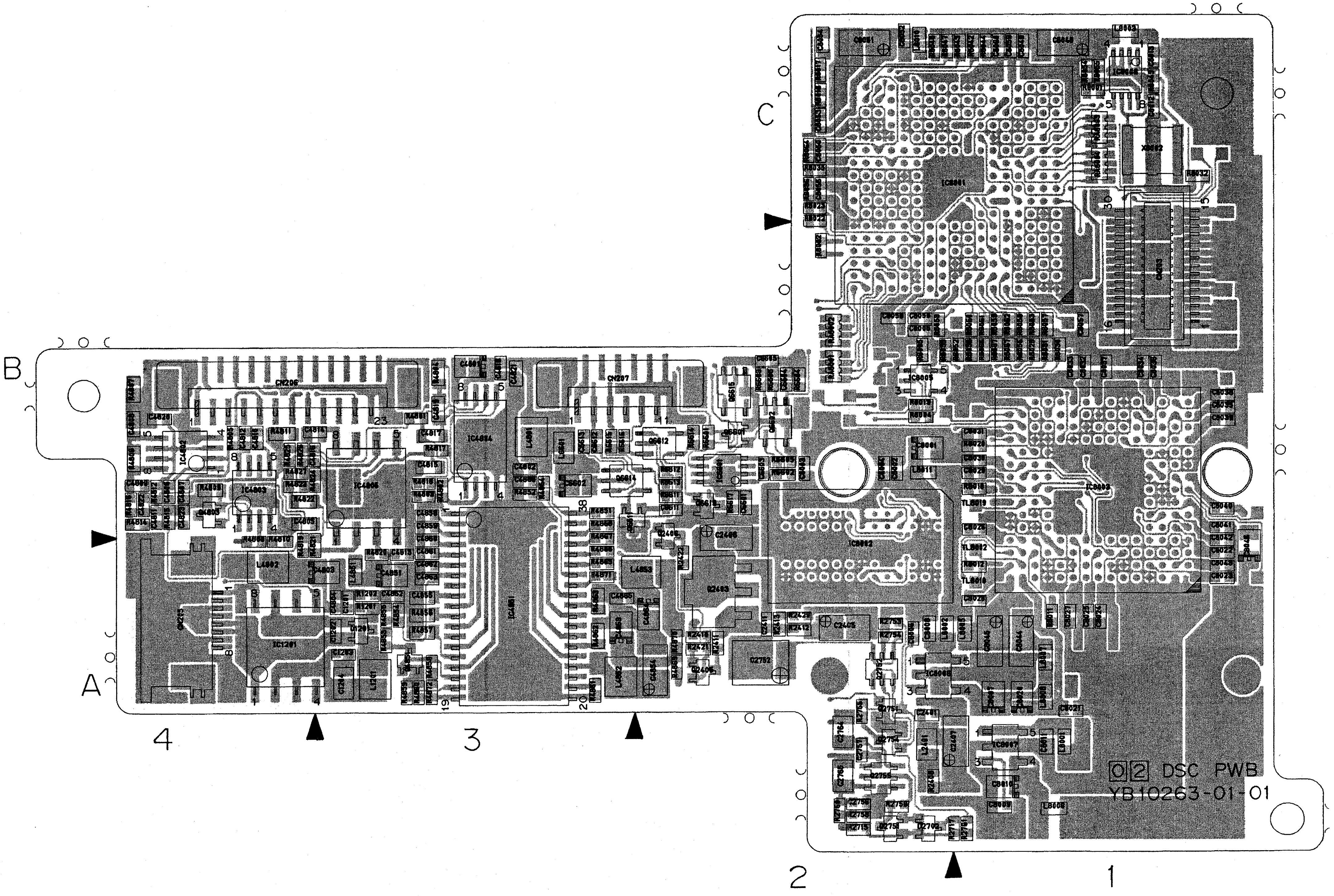
C8056	A	C	2C
C8057	A	C	1B
C8058	A	C	2B
C8059	A	C	1C
C8060	A	C	1C
CONNECTOR			
CN201	B	C	1A
CN202	B	C	4B
CN203	A	C	1B
CN204	B	C	4A
CN205	A	C	4A
CN206	A	C	4B
CN207	A	C	3B
DIODE			
D1201	A	C	3A
D2501	B	C	4B
D2502	B	C	4A
D2702	A	C	2A
D2751	A	C	2A
IC			
IC1201	A	C	4A
IC2201	B	C	3A
IC2501	B	C	4B
IC4802	A	C	4B
IC4803	A	C	4B
IC4804	A	C	3B
IC4805	A	C	3B
IC4851	A	C	3A
IC6601	A	C	2B
IC8001	A	C	2C
IC8002	A	C	2A
IC8003	A	C	1B
IC8004	B	C	1C
IC8005	A	C	2B
IC8006	A	C	2A
IC8007	A	C	1A
IC8008	A	C	1C
IC8009	B	C	1B
COIL			
L1201	A	C	3A
L2401	A	C	2A
L2601	B	C	4A
L2602	B	C	4A
L2603	B	C	4A
L4801	A	C	3B
L4802	A	C	4A
L4851	A	C	3A
L4852	A	C	3A
L4853	A	C	2A
L6601	A	C	3B
L8001	A	C	1A
L8002	A	C	2A
L8003	A	C	1C
L8005	A	C	1A
L8006	A	C	1A
L8007	A	C	1A
L8008	A	C	1A
L8009	B	C	1B
L8010	A	C	2C
L8011	A	C	2B
TRANSISTOR			
Q2201	B	C	4B
Q2403	A	C	2A
Q2405	A	C	2A
Q2406	A	C	2A
Q2501	B	C	4B
Q2603	B	C	4A
Q2604	B	C	4A
Q2605	B	C	4B
Q2703	B	C	2A

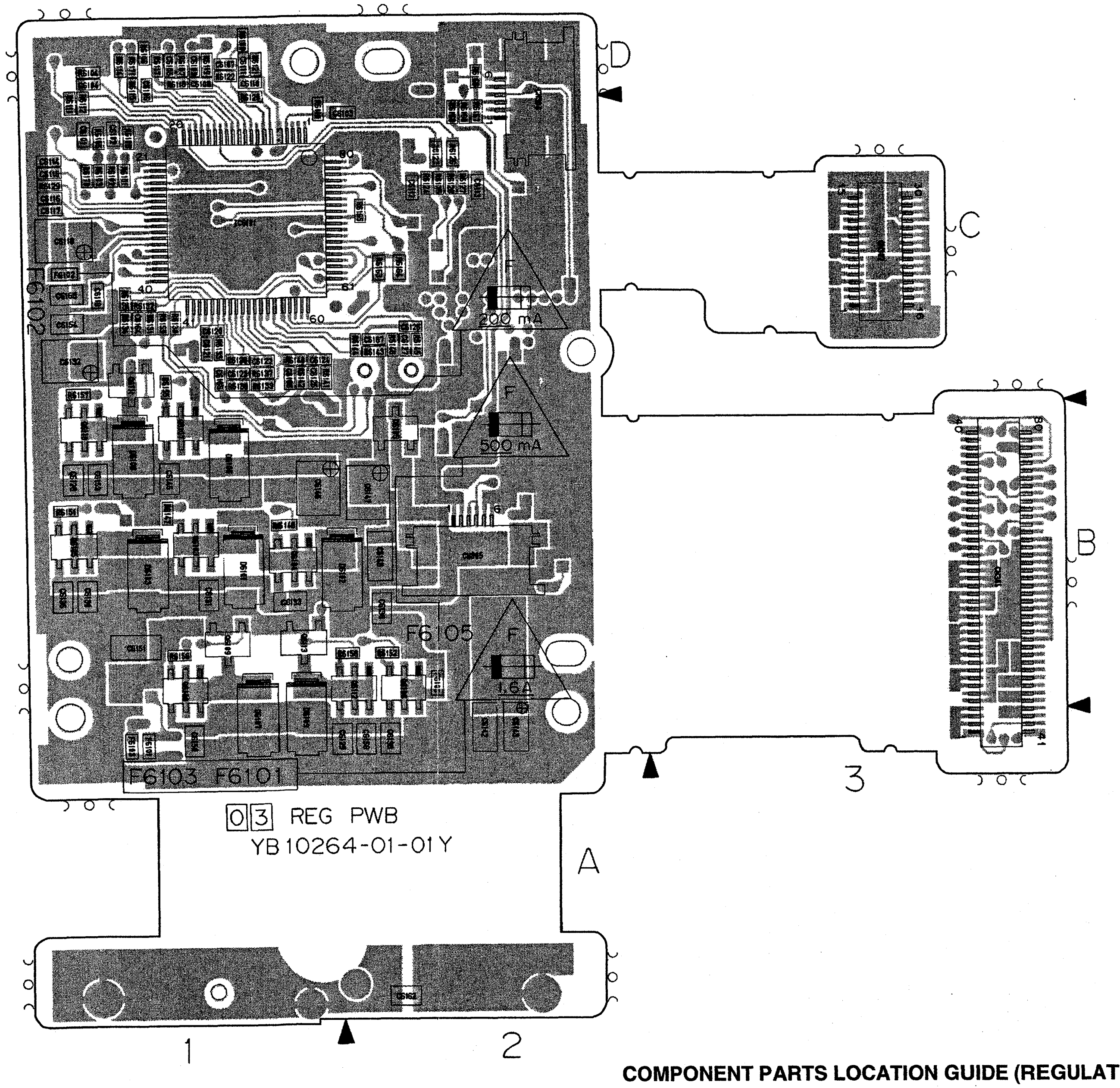
REF.No.	LOCATION		
Q2704	B	C	2A
Q2705	B	C	2A
Q2751	A	C	2A
Q2752	A	C	2A
Q2754	A	C	2A
Q2755	A	C	2A
Q4803	A	C	4B
Q4851	A	C	3A
Q6601	A	C	2B
Q6602	A	C	2B
Q6611	A	C	3B
Q6612	A	C	2B
Q6613	A	C	2B
Q6614	A	C	3B
Q6615	A	C	2B
RESISTOR			
R1201	A	C	3A
R1202	A	C	3A
R2201	B	C	2B
R2202	B	C	2B
R2203	B	C	3A
R2204	B	C	3A
R2205	B	C	3A
R2206	B	C	3A
R2208	B	C	3A
R2210	B	C	4B
R2220	B	C	3A
R2221	B	C	3A
R2224	B	C	3A
R2225	B	C	3A
R2226	B	C	3A
R2227	B	C	3A
R2228	B	C	2A
R2229	B	C	4B
R2230	B	C	4A
R2408	A	C	2A
R2410	A	C	2A
R2411	A	C	2A
R2412	A	C	2A
R2413	A	C	2A
R2415	B	C	3A
R2416	B	C	3A
R2417	B	C	3A
R2421	A	C	2A
R2422	A	C	2A
R2423	B	C	3A
R2429	A	C	2A
R2501	B	C	4A
R2502	B	C	4A
R2504	B	C	4B
R2505	B	C	4B
R2506	B	C	4B
R2507	B	C	4B
R2508	B	C	4B
R2509	B	C	4B
R2510	B	C	4B
R2512	B	C	4B
R2513	B	C	4B
R2514	B	C	4B
R2515	B	C	4B
R2601	B	C	4A
R2602	B	C	4A
R2603	B	C	4A
R2604	B	C	4B
R2609	B	C	4A
R2610	B	C	4B
R2613	B	C	4A
R2614	B	C	4A
R2615	B	C	4A
R2616	B	C	3B
R2617	B	C	4A
R2618	B	C	3B
R2619	B	C	4A
R2620	B	C	4B
R2621	B	C	4A
R2622	B	C	3A
R2623	B	C	4A
R2624	B	C	3A
R2627	B	C	2A
R2628	B	C	3B
R2629	B	C	2A
R2630	B	C	3B
R2631	B	C	2A
R2632	B	C	4B
R2633	B	C	2A
R2634	B	C	3B
R2635	B	C	2A
R2636	B	C	3B
R2637	B	C	4B
R2638	B	C	3B
R2639	B	C	3B
R2701	B	C	2B
R2702	B	C	2B
R2710	B	C	2A
R2711	B	C	2B
R2712	B	C	2B
R2713	B	C	2B
R2714	B	C	2B
R2715	A	C	2A
R2717	A	C	2A
R2718	B	C	2A
R2719	B	C	2A
R2720	B	C	2A
R2721	B	C	2A
R2753	A	C	2A
R2754	A	C	2A
R2755	A	C	2A
R2756	A	C	2A
R2757	B	C	2A
R2758	A	C	2A
R2759	B	C	2A
R2760	A	C	2A
R2761	A	C	1A
R2775	B	C	3B
R2776	B	C	2A
R2777	B	C	3B
R2778	B	C	2A
R4801	A	C	3B
R4802	A	C	3B
R4803	A	C	3B
R4804	A	C	3B
R4805	A	C	4B
R4806	A	C	4B
R4807	A	C	4B
R4808	A	C	4A
R4809	A	C	4B
R4810	A	C	4A
R4811	A	C	4B
R4812	A	C	4B
R4814	A	C	4B
R4815	A	C	4B
R4816	A	C	4B
R4817	A	C	3B
R4818	A	C	3B
R4819	A	C	4A
R4820	A	C	3A
R4821	A	C	4A
R4822	A	C	4B
R4823	A	C	4B
R4824	A	C	4B
R4825	A	C	4B
R4826	A	C	4B
R4827	A	C	4B
R4851	A	C	3B
R4852	A	C	3B
R4853	A	C	3A
R4854	A	C	3A
R4855	A	C	3A
R4856	A	C	3A
R4857	A	C	3A
R4858	A	C	3A
R4859	A	C	3A
R4860	A	C	3A
R4861	A	C	3A
R4862	A	C	3A
R4863	A	C	3A
R4864	A	C	3B
R4865	A	C	3A
R4866	A	C	3A
R4867	A	C	3A
R4868	A	C	3B
R4869	A	C	2A
R4870	A	C	2A
R4871	A	C	3A
R4872	A	C	3A
R6601	A	C	2B
R6602	A	C	2B
R6603	A	C	2B
R6604	A	C	2B
R6605	A	C	2B
R6606	A	C	2B
R6611	A	C	2B
R6612	A	C	2B
R6613	A	C	2B
R6614	A	C	2B
R6615	A	C	3B
R6616	A	C	3B
R6617	A	C	2B
R8001	A	C	1C
R8002	A	C	2B
R8003	B	C	1C
R8004	A	C	2B
R8005	A	C	2B
R8006	B	C	1B
R8007	B	C	1B
R8008	B	C	1B
R8009	B	C	1B
R8010	B	C	1B
R8011	A	C	1A
R8012	A	C	1A
R8013	A	C	2B
R8015	B	C	1C
R8016	A	C	2C
R8017	A	C	2C
R8018	A	C	1B
R8020	A	C	1B
R8021	B	C	2C
R8022	A	C	2B
R8023	A	C	2C
R8027	B	C	2B
R8028	B	C	2B
R8029	A	C	1B
R8030	A	C	1B
R8031	A	C	1B
R8032	A	C	1C
R8033	B	C	1C
R8034	B	C	1C
R8035	A	C	2C
R8036	A	C	2C
R8037	A	C	1B
R8038	A	C	1B
R8039	A	C	2B
R8040	B	C	1C
R8042	A	C	1C
R8043	A	C	1C
R8044	A	C	1C
R8047	A	C	2C
R8048	A	C	2C
R8049	A	C	1C
R8050	B	C	2B
R8051	B	C	2B
R8052	A	C	1B
R8053	A	C	2B
R8054	A	C	1C
R8055	A	C	1C
R8056	A	C	1B
R8057	A	C	1B
R8058	A	C	1B
R8059	A	C	1B
R8060	A	C	1B
R8061	A	C	1B
R8062	A	C	1B
R8063	A	C	1B
R8064	A	C	2C
R8065	B	C	2C
R8066	A	C	1B
R8067	A	C	1B
RA8001	A	C	2B
RA8002	A	C	2B
RA8003	A	C	1C
RA8004	A	C	1C
COIL			
X8002	A	C	1C

COMPONENT SIDE(A)

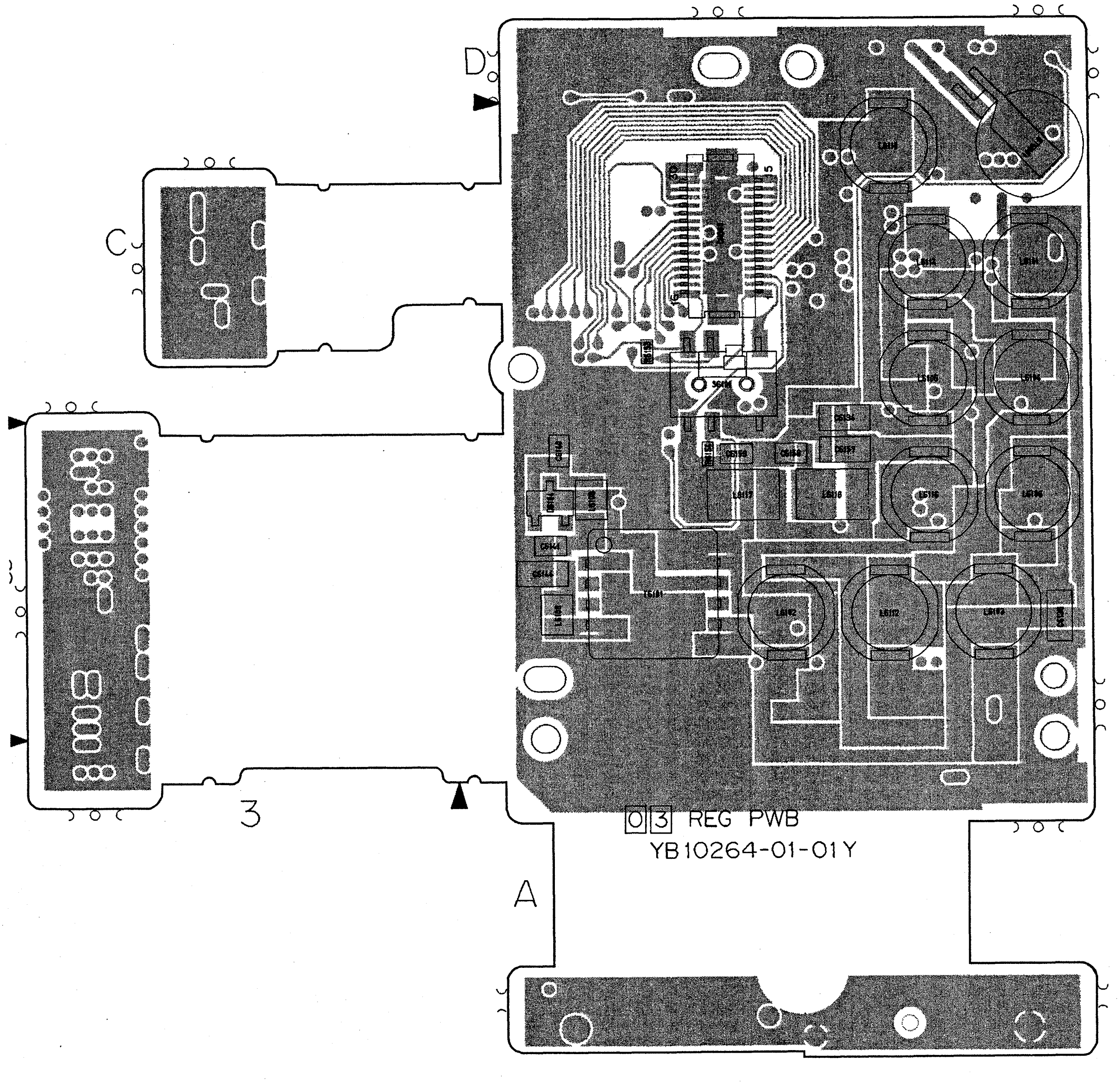


4.30 REGULATOR CIRCUIT BOARD

FOIL SIDE (B)



COMPONENT SIDE (A)

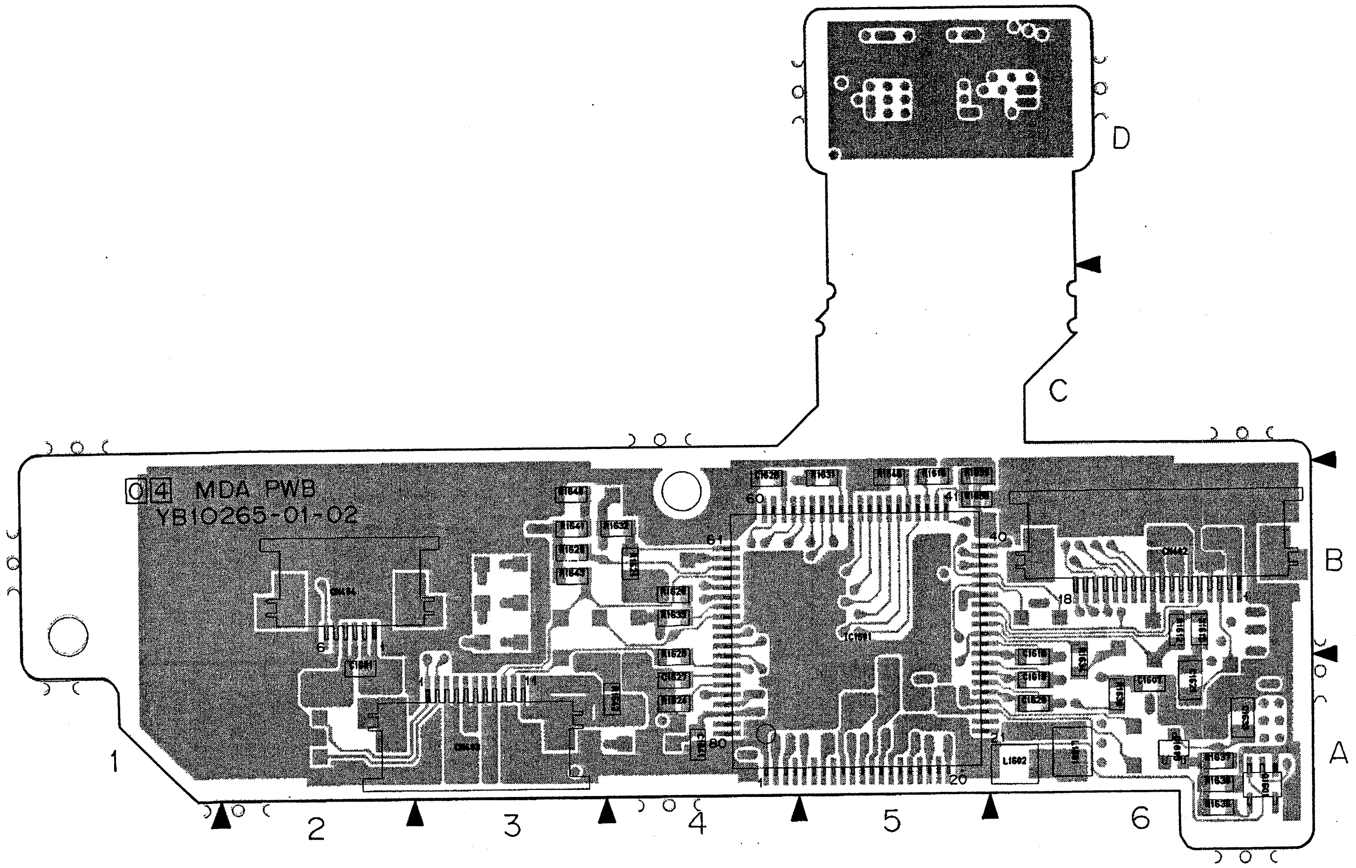


COMPONENT PARTS LOCATION GUIDE (REGULATOR)

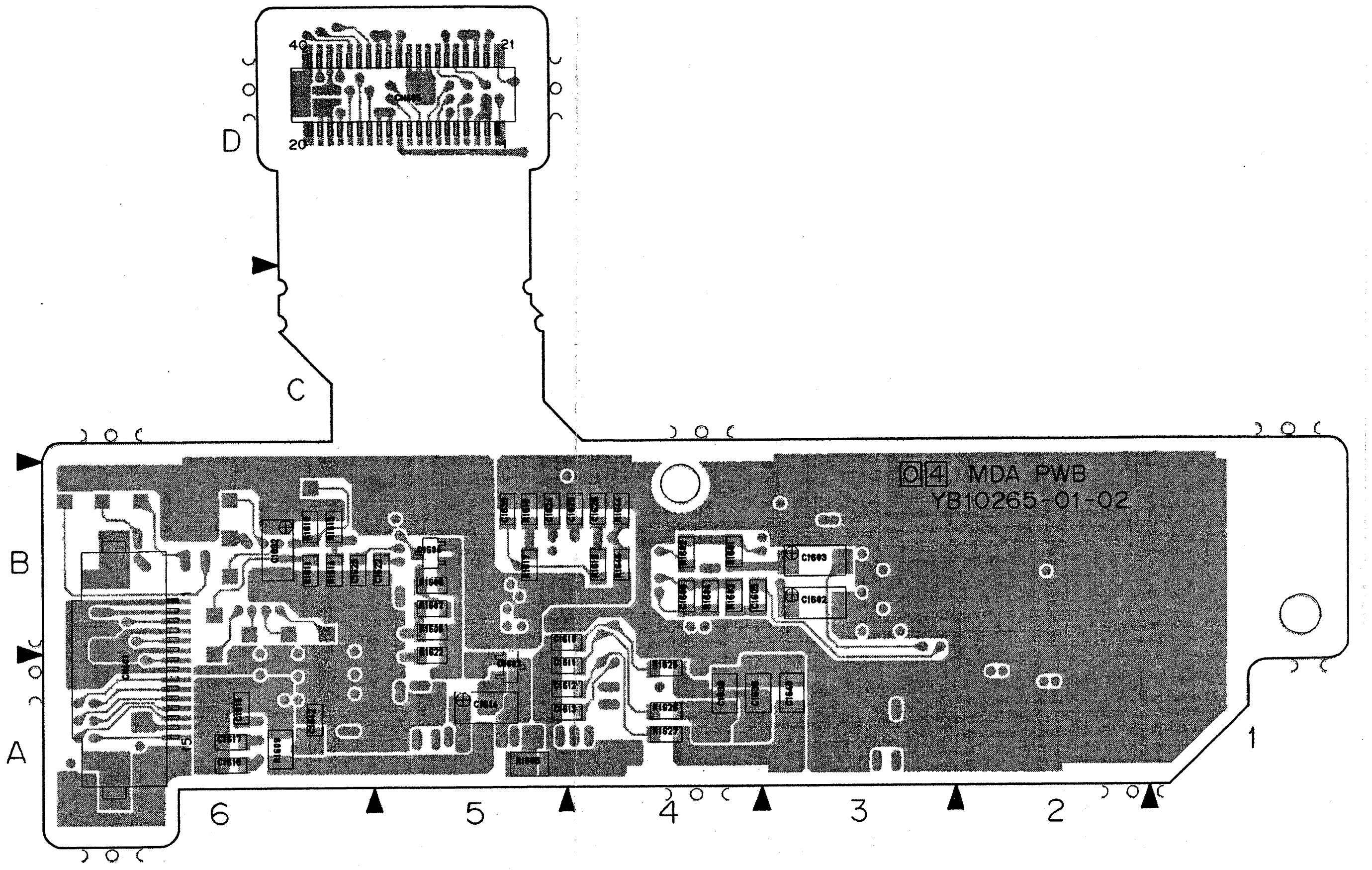
REF.No.	LOCATION		
CAPACITOR			
C6101	B	C	1C
C6102	B	C	1C
C6103	B	C	2C
C6104	B	C	1D
C6105	B	C	1D
C6106	B	C	1D
C6107	B	C	1D
C6108	B	C	1D
C6109	B	C	1D
C6110	B	C	1D
C6111	B	C	1D
C6112	B	C	2C
C6113	B	C	2C
C6114	B	C	1C
C6115	B	C	1C
C6116	B	C	1C
C6117	B	C	1C
C6118	B	C	1C
C6119	B	C	1C
C6120	B	C	1C
C6121	B	C	1C
C6122	B	C	1C
C6123	B	C	1C
C6124	B	C	1C
C6125	B	C	1C
C6126	B	C	2C
C6127	B	C	2C
C6128	B	C	1B
C6129	B	C	1A
C6130	B	C	1B
C6131	B	C	1B
C6132	B	C	1C
C6133	B	C	1B
C6134	A	C	1C
C6135	B	C	1B
C6136	A	C	1B
C6138	B	C	2A
C6139	B	C	2B
C6140	A	C	2B
C6141	A	C	2B
C6142	B	C	2A
C6143	B	C	2A
C6144	A	C	2B
C6145	B	C	1B
C6146	B	C	1B
C6147	B	C	2B
C6148	B	C	2B
C6150	B	C	1A
C6151	B	C	1B
C6153	B	C	1B
C6154	B	C	1C
C6156	B	C	2A
C6157	A	C	1B
C6158	A	C	1B
C6159	A	C	2B
C6162	B	C	2A
C6163	B	C	1C
C6164	B	C	1C
C6165	B	C	1C
C6166	B	C	1C
C6167	B	C	2C
CONNECTOR			
CN301	B	C	3A
CN302	B	C	3C
CN303	A	C	2C
CN304	B	C	2C
CN305	B	C	2B
CN6101	A	D	1A
DIODE			
D6101	B	C	1B
D6102	B	C	2B
D6103	B	C	1B
D6104	A	C	2B
D6105	B	C	2B
D6106	B	C	1B
D6107	B	C	1A
D6108	B	C	1B
D6109	B	C	1A
IC			
IC6101	B	C	1C
COIL			
L6101	A	C	1C
L6102	A	C	1B
L6103	A	C	1B
L6104	A	C	1C
L6105	A	C	1C
L6106	A	C	1B
L6108	A	C	2B
L6109	A	C	2B
L6110	A	C	1C
L6112	A	C	1B
L6114	A	C	1C
L6116	A	C	1B
L6117	A	C	2B
L6118	A	C	1B
TRANSISTOR			
Q6103	B	C	1B
Q6104	B	C	1B
Q6105	B	C	1B
Q6106	B	C	2B
Q6107	B	C	1B
Q6108	B	C	1B
Q6109	B	C	1B
Q6110	B	C	1B
Q6111	B	C	1C
Q6112	B	C	2B
Q6113	B	C	1B
RESISTOR			
R6101	B	C	1C
R6102	B	C	1C
R6103	B	C	1C
R6104	B	C	1D
R6105	B	C	1C
R6106	B	C	1D
R6107	B	C	1D
R6108	B	C	1C
R6109	B	C	1D
R6110	B	C	1C
R6111	B	C	1C
R6112	B	C	1C
R6114	B	C	1D
R6115	B	C	1D
R6117	B	C	1D
R6118	B	C	1D
R6119	B	C	1D
R6120	B	C	1D
R6121	B	C	1D
R6122	B	C	1D
R6123	B	C	2C
R6124	B	C	2C
R6125	B	C	2C
R6126	B	C	2C
R6127	B	C	2C
R6128	B	C	2C
R6129	B	C	1C
R6130	B	C	1C
R6131	B	C	1C
R6132	B	C	1C
R6133	B	C	1C
R6134	B	C	1C
R6135	B	C	1C
R6136	B	C	1C
R6137	B	C	1C
R6138	B	C	1C
R6139	B	C	1C
R6140	B	C	1C
R6141	B	C	1C
R6142	B	C	1C
R6143	B	C	2C
R6144	B	C	2C
R6145	B	C	2C
R6146	B	C	2C
R6147	B	C	1B
R6148	B	C	1B
R6151	B	C	1B
R6152	B	C	2B
R6153	A	C	2C
R6154	A	C	2B
R6155	B	C	1C
R6156	B	C	1B
R6157	B	C	1C
R6158	B	C	2B
R6159	B	C	1C
R6163	B	C	2C
R6164	B	C	2C
R6165	B	C	2C
R6166	B	C	2D
R6167	B	C	2C
R6168	B	C	2C
R6169	B	C	2C
R6170	B	C	1C
R6171	B	C	1D
OTHER			
BT6001	A	C	1C
F6101	B	C	1A
F6102	B	C	1C
F6103	B	C	1A
F6105	B	C	2B
S6101	A	C	2C
T6101	A	C	2B

4.31 MDA CIRCUIT BOARD

FOIL SIDE (B)



COMPONENT SIDE (A)

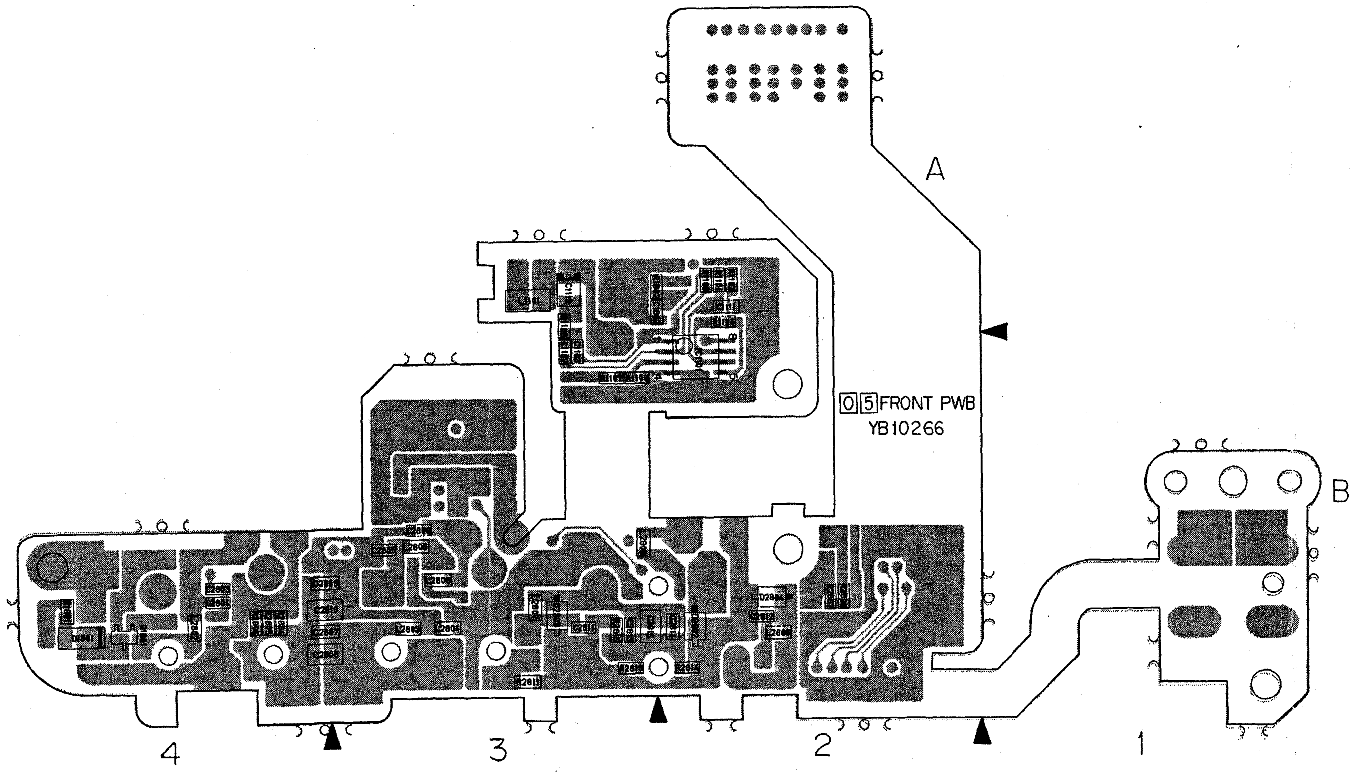


COMPONENT PARTS LOCATION GUIDE (MDA)

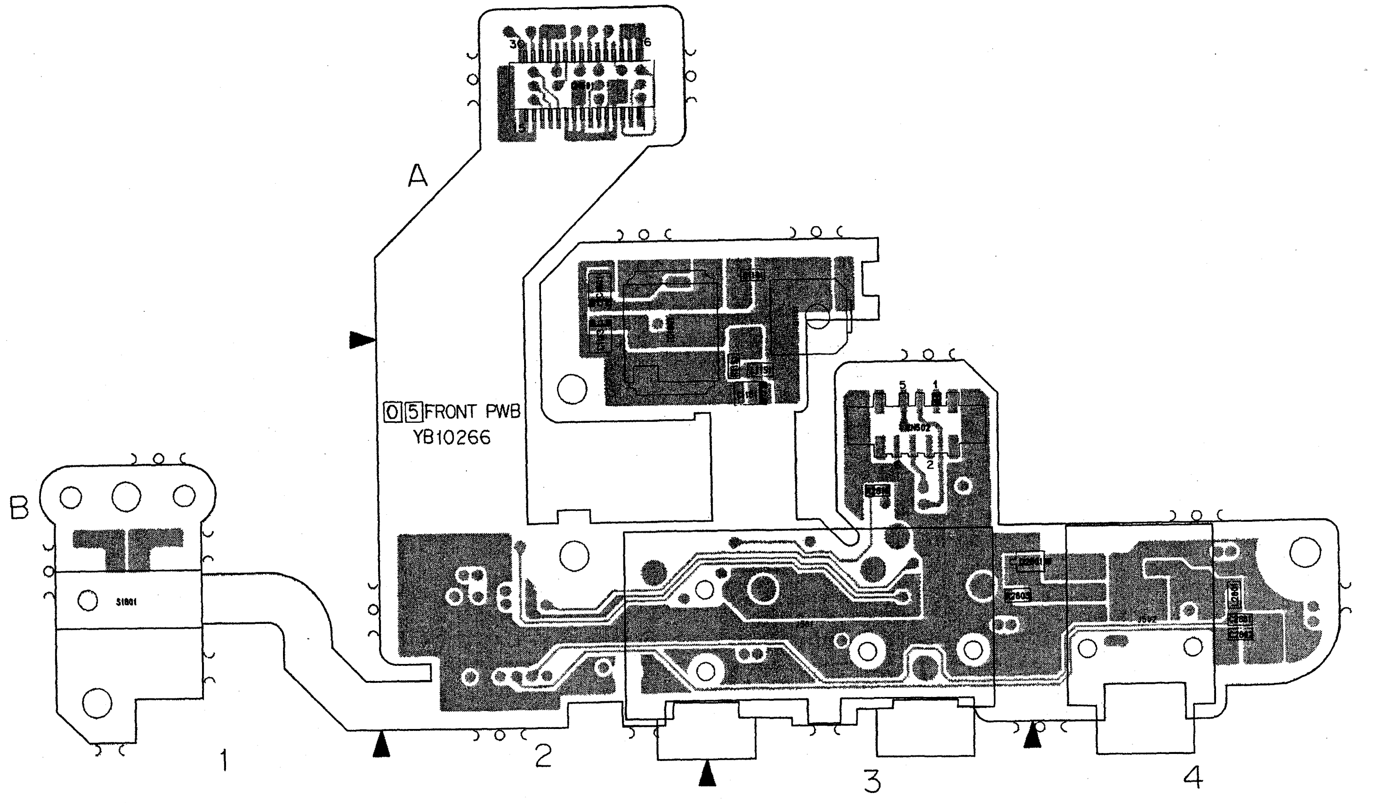
REF.No.	LOCATION		
CAPACITOR			
C1601	B	C	2A
C1602	A	C	3B
C1603	A	C	3B
C1605	A	C	4B
C1606	A	C	4B
C1607	B	C	6A
C1610	A	C	5B
C1611	A	C	5A
C1612	A	C	5A
C1613	A	C	5A
C1614	A	C	5A
C1615	A	C	6A
C1616	A	C	6A
C1617	A	C	6A
C1618	B	C	6A
C1619	B	C	6A
C1620	B	C	6A
C1621	B	C	6A
C1622	A	C	5B
C1623	A	C	6B
C1624	A	C	5B
C1625	A	C	4B
C1626	A	C	4B
C1627	B	C	4A
C1628	B	C	4B
C1632	A	C	6B
C1633	B	C	6A
C1635	A	C	5B
C1638	A	C	4A
C1639	A	C	4A
C1640	A	C	3A
C1641	B	C	4A
C1642	A	C	6A
CONNECTOR			
CN401	A	C	6B
CN402	B	C	6B
CN403	B	C	3A
CN404	B	C	2B
CN405	A	C	5D
DIODE			
D1602	A	C	5A
D1603	B	C	6A
D1604	A	C	5B
IC			
IC1601	B	C	5B
COIL			
L1601	B	C	6A
L1602	B	C	6A
TRANSISTOR			
Q1601	B	C	6A
RESISTOR			
R1601	A	C	4B
R1602	A	C	4B
R1603	A	C	4B
R1604	A	C	4B
R1605	A	C	5A
R1606	A	C	5B
R1607	A	C	5B
R1608	A	C	5B
R1609	A	C	6A
R1610	A	C	6B
R1611	A	C	6B
R1612	B	C	6B
R1613	B	C	6B
R1614	A	C	6B
R1615	A	C	6B
R1616	B	C	5B
R1617	A	C	5B
R1618	A	C	5B
R1619	A	C	4B
R1620	B	C	4B
R1621	B	C	4B
R1622	A	C	5A
R1624	B	C	4A
R1625	A	C	4A
R1626	A	C	4A
R1627	A	C	4A
R1628	B	C	4B
R1629	B	C	3B
R1630	B	C	6A
R1631	B	C	5B
R1632	B	C	4B
R1633	B	C	4B
R1634	B	C	6A
R1635	B	C	6A
R1636	B	C	6A
R1637	B	C	6A
R1638	B	C	5B
R1639	B	C	5B
R1640	B	C	3B
R1641	B	C	3B
R1642	B	C	4A
R1643	B	C	3B
R1644	A	C	4B
R1645	A	C	4B
R1646	B	C	5B

4.32 FRONT CIRCUIT BOARD

FOIL SIDE (B)



COMPONENT SIDE (A)

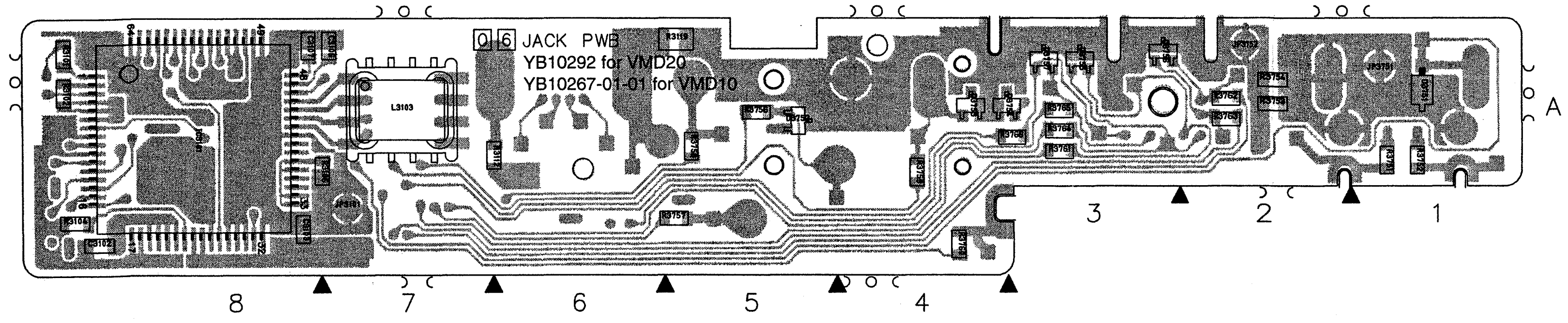


COMPONENT PARTS LOCATION GUIDE (FRONT)

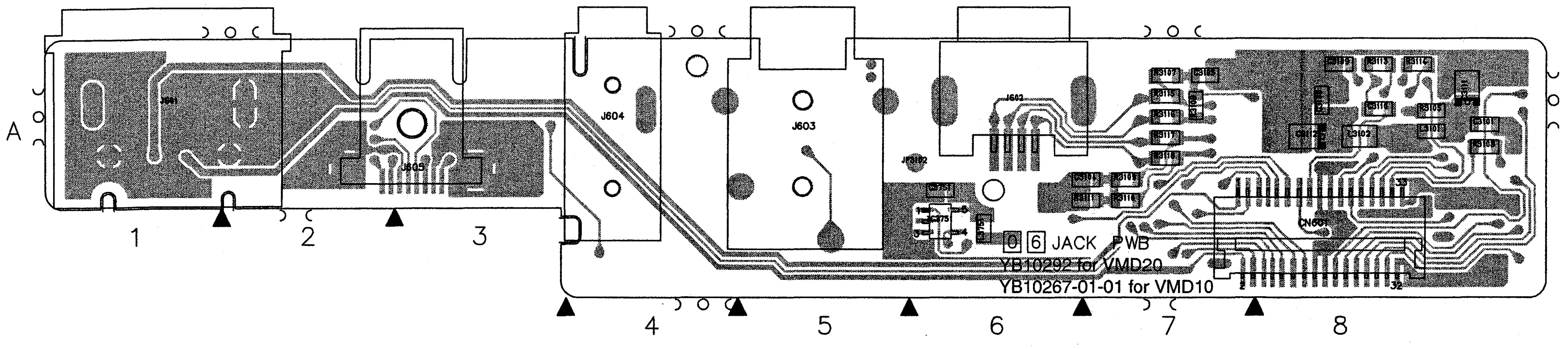
REF.No.	LOCATION		
CAPACITOR			
C1101	A	C	3A
C1102	B	C	3B
C1103	B	C	3B
C1111	B	C	2A
C1112	B	C	3A
C1113	A	C	2B
C1151	A	C	3B
C1801	A	C	2A
C1802	B	C	2A
C2801	A	C	4B
C2802	A	C	4B
C2803	B	C	4B
C2804	B	C	4B
C2805	B	C	3B
C2806	B	C	3B
C2807	B	C	4B
C2808	B	C	4B
C2809	B	C	4B
C2810	B	C	4B
C2811	B	C	3B
C2812	B	C	2B
C2813	B	C	3B
C2814	B	C	2B
C2815	B	C	3B
CONNECTOR			
CN501	A	C	2A
CN502	A	C	3B
DIODE			
D1801	B	C	4B
D2801	A	C	3B
D2802	B	C	2B
D2803	B	C	3B
D2804	B	C	2B
IC			
IC1101	B	C	2B
IC1801	A	C	2A
COIL			
L1101	B	C	3A
L1151	A	C	3B
L2801	A	C	4B
L2802	B	C	4B
L2803	B	C	3B
L2804	B	C	3B
L2805	B	C	3B
L2806	B	C	3B
L2807	B	C	3B
L2808	B	C	2B
L2809	B	C	3B
TRANSISTOR			
Q1151	A	D	3A
Q1801	B	C	4B
RESISTOR			
R1101	B	C	2A
R1102	B	C	2A
R1104	B	C	2A
R1106	B	C	2A
R1107	B	C	3B
R1108	B	C	3A
R1109	B	C	3B
R1151	A	C	3B
R1801	B	C	4B
R1802	B	C	2A
R2803	A	C	3B
R2804	B	C	4B
R2805	B	C	4B
R2806	B	C	4B
R2807	B	C	2B
R2808	B	C	2B
R2811	B	C	3B
R2813	B	C	3B
R2814	B	C	2B
R2815	B	C	3B
R2816	A	C	3B
OTHER			
J501	A	D	2B
J502	A	D	4B
S1801	A	C	1B

4.33 JACK CIRCUIT BOARD FOR VMD10 AND VMD20

FOIL SIDE (B)


0 6 JACK PWB
YB10292 for VMD20
YB10267-01-01 for VMD10
L3103
A
3
2
1
8
7
6
5
4

COMPONENT SIDE (A)

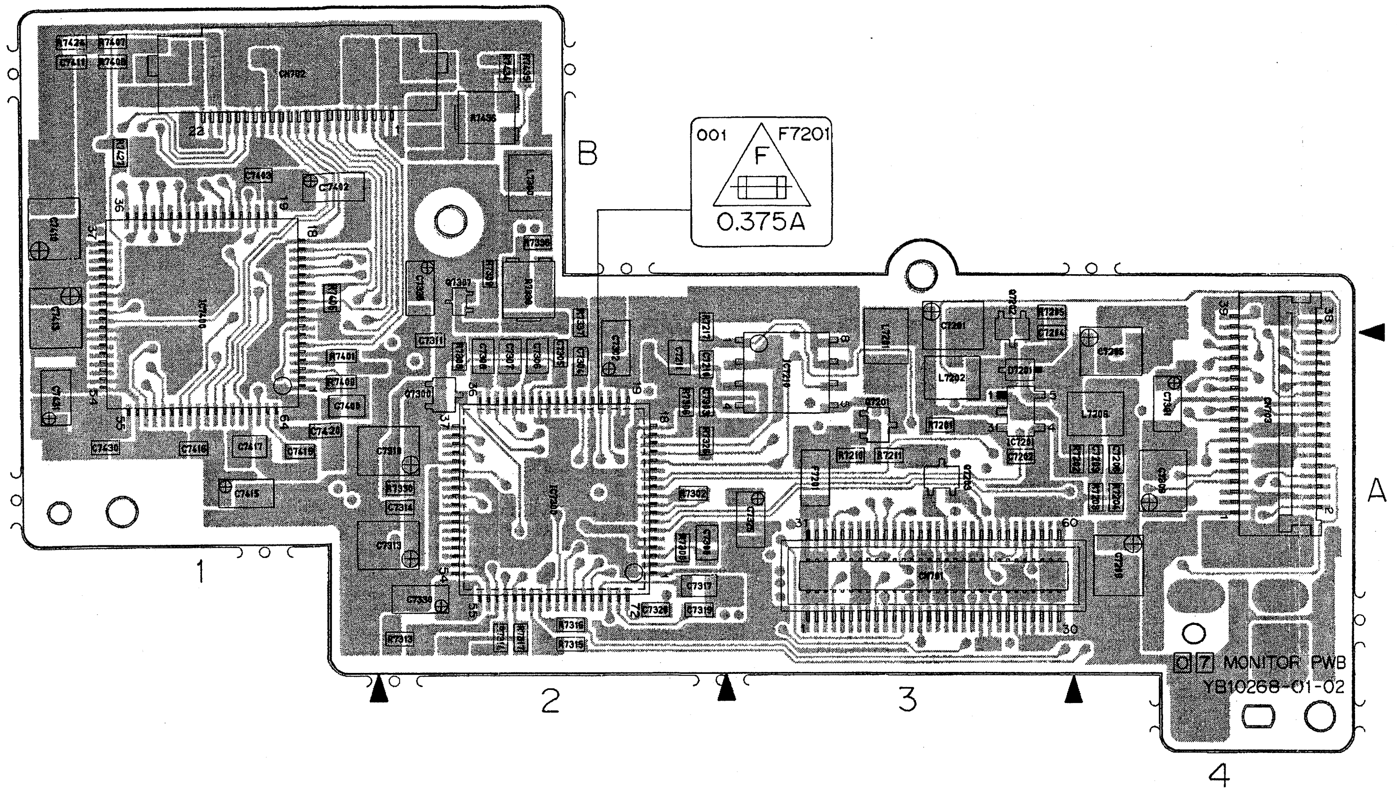

A
J604
J603
J605
CN601
0 6 JACK PWB
YB10292 for VMD20
YB10267-01-01 for VMD10
1
2
3
4
5
6
7
8

COMPONENT PARTS LOCATION GUIDE (JACK)

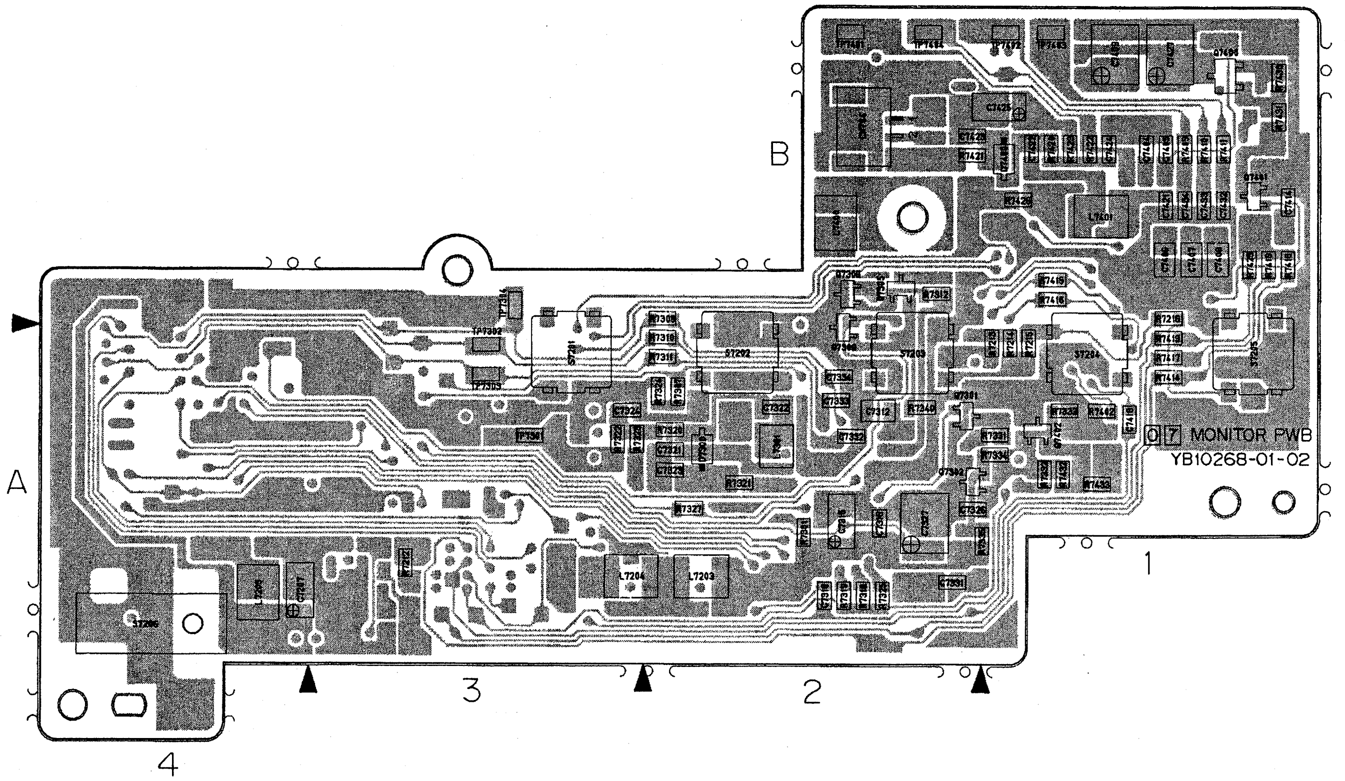
REF.No.	LOCATION		
CAPACITOR			
C3101	A	C	8A
C3102	B	C	8A
C3103	B	C	8B
C3104	A	C	7A
C3105	A	C	7A
C3106	B	C	7A
C3107	B	C	8A
C3108	A	C	8A
C3109	A	C	8A
C3110	A	C	8A
C3111	A	C	8A
C3112	A	C	8A
C3751	A	C	6A
CONNECTOR			
CN601	A	C	7A
DIODE			
D3751	B	C	1A
D3752	B	C	5A
D3753	B	C	4A
D3754	B	C	4A
D3755	B	C	3A
D3756	B	C	3A
D3757	B	C	3A
IC			
IC3101	B	C	8A
IC3751	A	C	6A
COIL			
L3101	A	C	8A
L3102	A	C	8A
L3103	B	C	7A
L3751	A	C	6A
RESISTOR			
R3101	B	C	8A
R3102	B	C	8A
R3103	A	C	8A
R3104	B	C	8A
R3105	A	C	8A
R3106	B	C	8A
R3107	A	C	7A
R3108	A	C	7A
R3109	A	C	7A
R3110	A	C	7A
R3111	A	C	7A
R3112	B	C	7A
R3113	A	C	8A
R3114	A	C	8A
R3115	A	C	7A
R3116	A	C	7A
R3117	A	C	7A
R3118	A	C	7A
R3119	B	C	5A
R3751	B	C	1A
R3752	B	C	1A
R3753	B	C	2A
R3754	B	C	2A
R3756	B	C	5A
R3757	B	C	5A
R3758	B	C	5A
R3759	B	C	4A
R3760	B	C	4A
R3761	B	C	3A
R3762	B	C	2A
R3763	B	C	2A
R3764	B	C	3A
R3765	B	C	3A
R3766	B	C	3A
OTHER			
J601	A	D	1A
J602	A	C	6A
J603	A	D	5A
J604	A	D	4A
J605	A	C	3A
JP3101	B	C	7A
JP3102	A	D	6A
JP3751	B	C	1A
JP3752	B	C	2A

4.34 MONITOR CIRCUIT BOARD

FOIL SIDE (B)



COMPONENT SIDE (A)

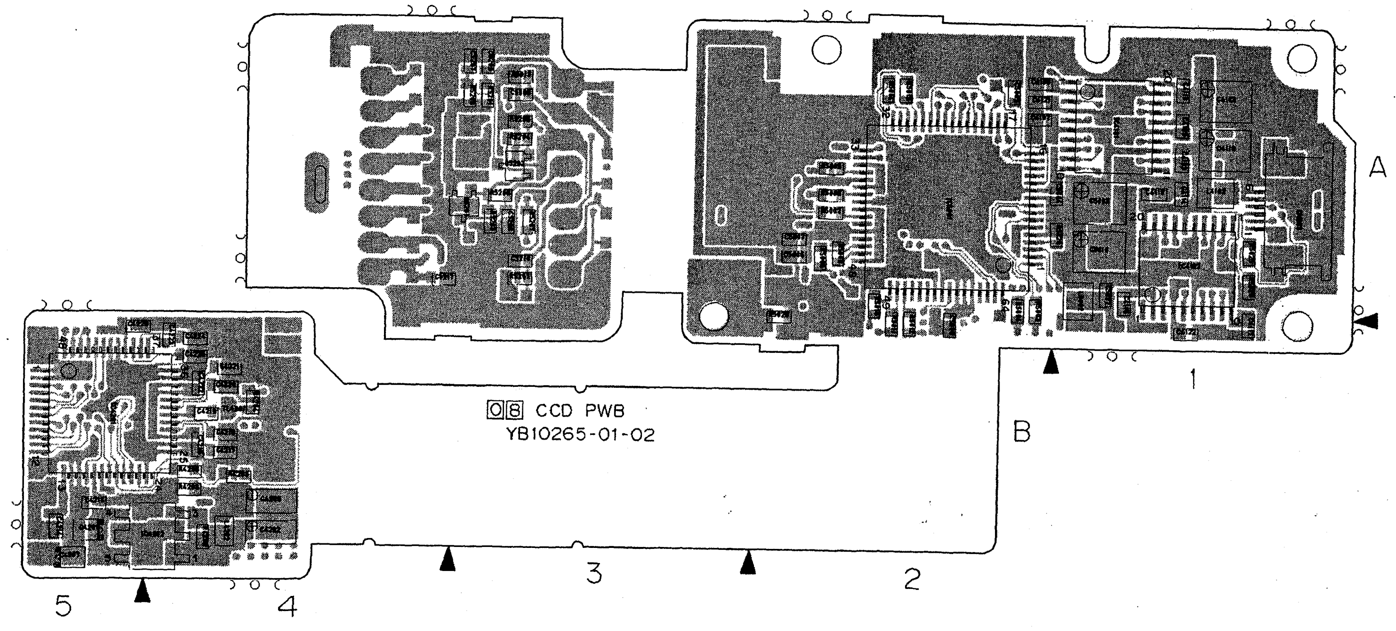


COMPONENT PARTS LOCATION GUIDE (MONITOR)

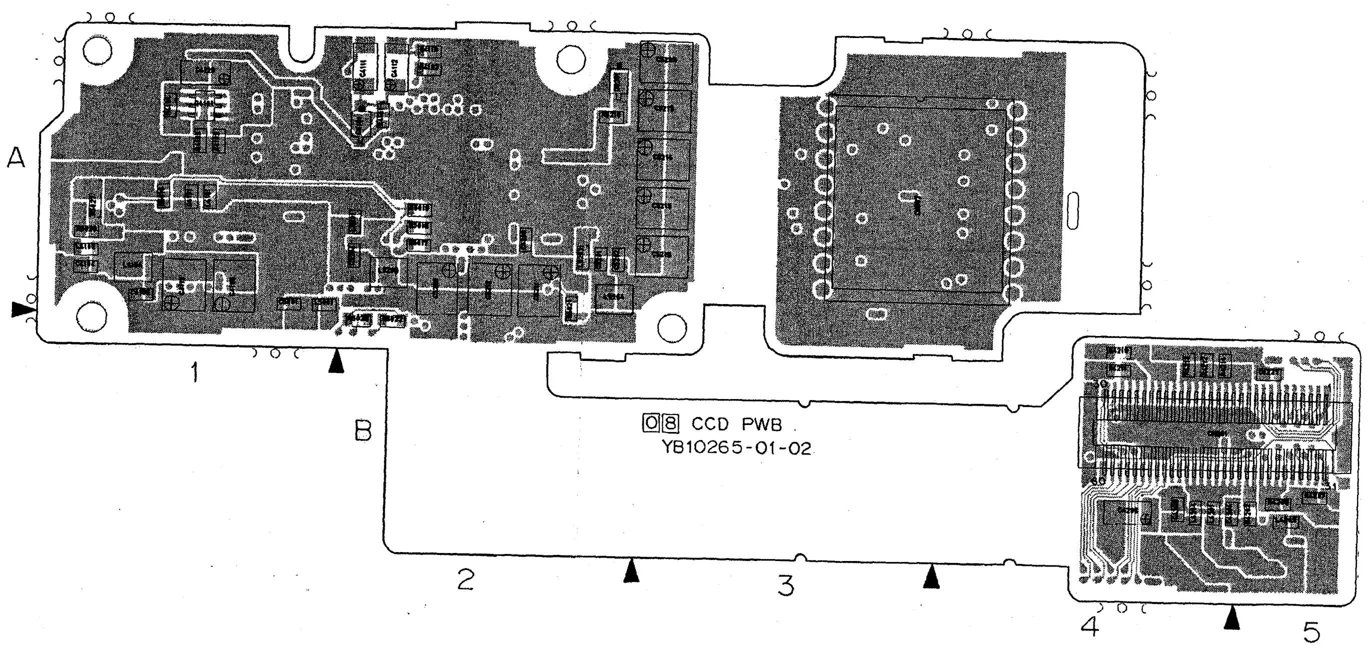
REF.No.	LOCATION		
CAPACITOR			
C7201	B	C	3B
C7202	B	C	3A
C7203	B	C	4A
C7204	B	C	3A
C7205	B	C	4A
C7206	B	C	4A
C7207	A	C	4A
C7209	B	C	4A
C7210	B	C	2A
C7211	B	C	2A
C7300	B	C	2A
C7301	B	C	4A
C7302	B	C	2A
C7303	B	C	2A
C7304	B	C	2A
C7305	B	C	2A
C7306	B	C	2A
C7307	B	C	2A
C7308	B	C	2A
C7309	B	C	4A
C7310	B	C	2A
C7311	B	C	2A
C7312	A	C	2A
C7313	B	C	2A
C7314	B	C	2A
C7315	A	C	2A
C7316	A	C	2A
C7317	B	C	2A
C7318	A	C	2A
C7319	B	C	2A
C7320	B	C	2A
C7321	A	C	2A
C7322	A	C	2A
C7323	A	C	2A
C7324	A	C	3A
C7325	B	C	3A
C7326	A	C	2A
C7327	A	C	2A
C7330	B	C	2A
C7331	A	C	2A
C7332	A	C	2A
C7333	A	C	2A
C7334	A	C	2A
C7335	B	C	2B
C7400	B	C	1A
C7402	B	C	1B
C7403	B	C	1B
C7404	A	C	1B
C7405	A	C	1B
C7406	A	C	1B
C7407	A	C	1B
C7408	A	C	1B
C7409	A	C	1B
C7410	B	C	1B
C7411	B	C	1B
C7413	B	C	1B
C7414	A	C	1B
C7415	B	C	1A
C7416	B	C	1A
C7417	B	C	1A
C7418	A	C	1A
C7419	B	C	1A
C7420	B	C	1A
C7421	A	C	1B
C7422	A	C	1B
C7423	A	C	2B
C7424	A	C	1B
C7425	A	C	1B
C7427	A	C	1B
C7430	B	C	1A
C7431	B	C	1A
C7432	A	C	1B
C7433	A	C	1B
C7434	A	C	1B
CONNECTOR			
CN701	B	C	3A
CN702	B	C	2B
CN702	B	C	3B
CN703	B	C	4A
CN704	A	C	2B
DIODE			
D7201	B	C	3A
D7300	A	C	2A
D7400	A	C	1B
IC			
IC7201	B	C	3A
IC7210	B	C	3A
IC7300	B	C	2A
IC7400	B	C	1B
COIL			
L7201	B	C	3A
L7202	B	C	3A
L7203	A	C	2A
L7204	A	C	3A
L7205	A	C	4A
L7206	B	C	4A
L7300	B	C	2B
L7301	A	C	2A
L7400	A	C	2B
L7401	A	C	1B
TRANSISTOR			
Q7201	B	C	3A
Q7202	B	C	3A
Q7203	B	C	3A
Q7300	B	C	2A
Q7301	A	C	2A
Q7302	A	C	2A
Q7305	A	C	2B
Q7306	A	C	2B
Q7307	B	C	2B
Q7308	A	C	2A
Q7400	A	C	1B
Q7401	A	C	1B
Q7402	A	C	1A
RESISTOR			
R7201	B	C	3A
R7202	B	C	4A
R7203	B	C	4A
R7204	B	C	4A
R7205	B	C	3B
R7210	B	C	3A
R7211	B	C	3A
R7212	A	C	3A
R7213	A	C	1A
R7214	A	C	1A
R7215	A	C	1A
R7216	A	C	1B
R7217	B	C	2B
R7300	B	C	2A
R7301	A	C	2A
R7302	B	C	2A
R7306	B	C	2A
R7307	A	C	2A
R7308	B	C	2A
R7309	A	C	2B
R7310	A	C	2A
R7311	A	C	2A
R7312	A	C	2B
R7313	B	C	2A
R7314	B	C	2A
R7315	B	C	2A
R7316	B	C	2A
R7317	B	C	2A
R7318	A	C	2A
R7319	A	C	2A
R7320	A	C	2A
R7321	A	C	2A
R7322	A	C	3A
R7323	A	C	3A
R7324	A	C	2A
R7325	A	C	2A
R7326	B	C	2A
R7327	A	C	2A
R7330	B	C	2A
R7331	A	C	1A
R7332	A	C	1A
R7333	A	C	1A
R7334	A	C	1A
R7335	A	C	1A
R7336	B	C	2B
R7337	B	C	2B
R7338	B	C	2B
R7339	B	C	2B
R7340	A	C	2A
R7400	B	C	1A
R7401	B	C	1A
R7402	A	C	1A
R7406	B	C	1B
R7407	B	C	1B
R7408	B	C	1B
R7409	A	C	1B
R7410	A	C	1B
R7411	A	C	1B
R7413	A	C	1A
R7414	A	C	1A
R7415	A	C	1B
R7416	A	C	1B
R7417	A	C	1A
R7418	A	C	1B
R7419	A	C	1B
R7420	A	C	1B
R7421	A	C	2B
R7422	A	C	1B
R7423	A	C	1B
R7424	B	C	1B
R7425	A	C	1B
R7426	A	C	1B
R7427	B	C	1B
R7430	A	C	1B
R7431	A	C	1B
R7432	A	C	1A
R7433	A	C	1A
R7434	B	C	2B
R7435	B	C	2B
R7436	B	C	2B
TEST POINT			
TP7301	A	C	3A
TP7302	A	C	3A
TP7303	A	C	3A
TP7304	A	C	3B
TP7401	A	C	2B
TP7402	A	C	1B
TP7403	A	C	1B
TP7404	A	C	2B
OTHER			
F7201	B	C	3A
S7201	A	C	3A
S7202	A	C	2A
S7203	A	C	2A
S7204	A	C	1A
S7205	A	C	1A
S7206	A	C	4A

4.35 CCD CIRCUIT BOARD

FOIL SIDE (B)



COMPONENT SIDE (A)

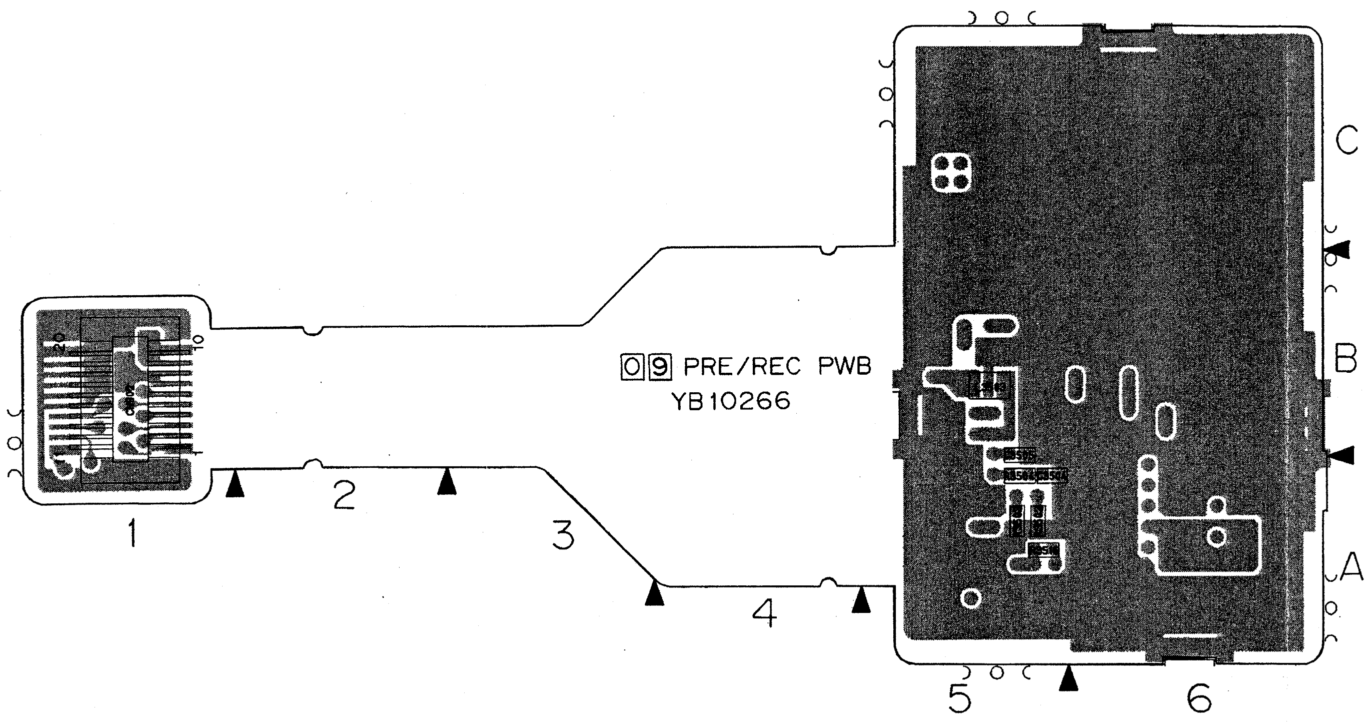


COMPONENT PARTS LOCATION GUIDE (CCD)

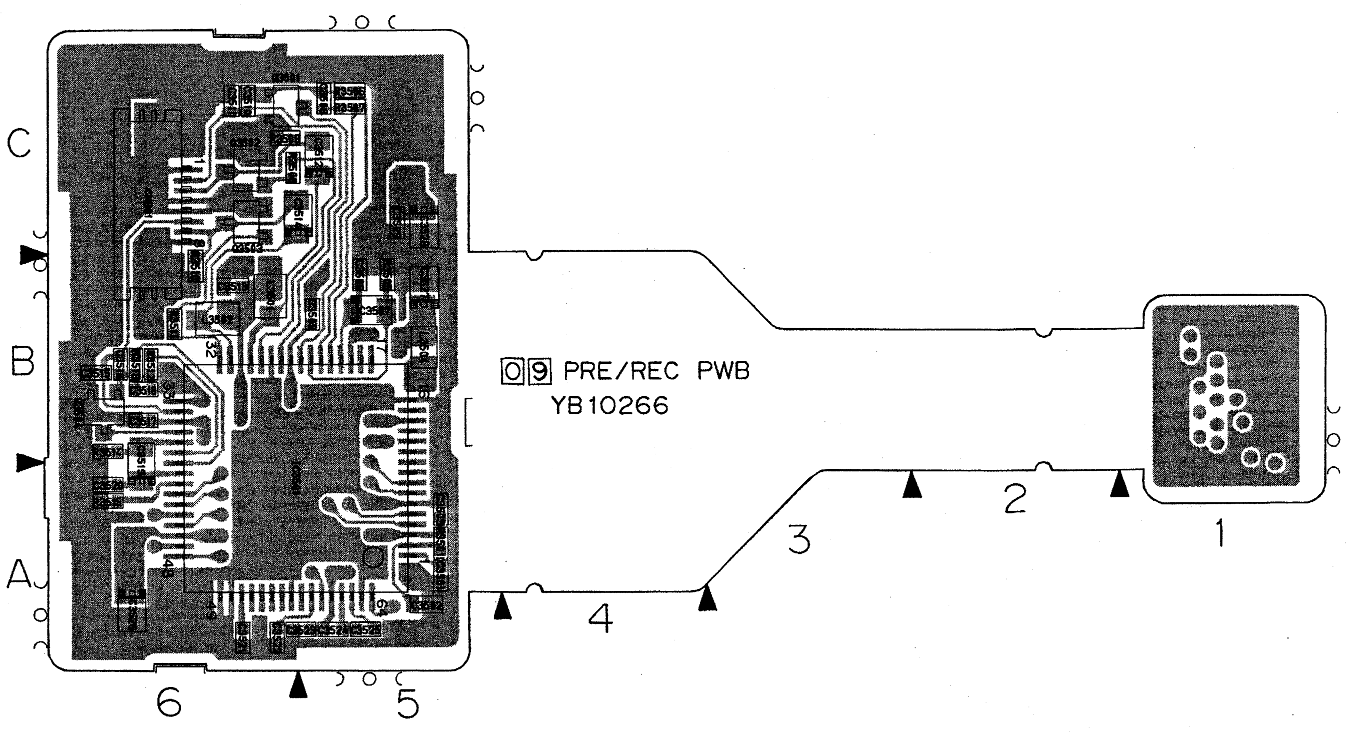
REF.No.	LOCATION		
CAPACITOR			
C4101	A	C	1A
C4102	B	C	1A
C4103	B	C	1A
C4104	A	C	1A
C4105	A	C	1A
C4106	A	C	1A
C4107	B	C	2A
C4108	B	C	2A
C4109	B	C	1A
C4110	B	C	1A
C4111	A	C	2A
C4112	A	C	2A
C4113	A	C	2A
C4114	B	C	1A
C4115	B	C	1A
C4116	B	C	1A
C4117	B	C	1B
C4118	B	C	1A
C4119	A	C	1A
C4120	A	C	1A
C4121	B	C	2A
C4122	B	C	1B
C4201	B	C	5B
C4202	B	C	4B
C4204	A	C	5B
C4205	B	C	4B
C4206	A	C	4B
C4207	B	C	5B
C4214	B	C	5B
C4215	B	C	5B
C4216	B	C	4B
C4217	B	C	4B
C4218	B	C	4B
C4219	B	C	4B
C4220	B	C	4B
C4221	B	C	4B
C4222	B	C	4B
C4223	B	C	4B
C4224	B	C	4B
C4225	B	C	4B
C4226	B	C	5B
C4227	A	C	5B
C4228	A	C	4B
C5001	A	C	1A
C5002	B	C	1A
C5003	B	C	1A
C5004	B	C	1A
C5005	B	C	2A
C5006	B	C	2A
C5007	B	C	2A
C5008	B	C	3A
C5009	B	C	2B
C5010	B	C	1A
C5201	A	C	2A
C5202	A	C	2A
C5203	A	C	3A
C5204	A	C	2A
C5205	A	C	2A
C5206	A	C	2A
C5207	B	C	3A
C5208	B	C	3A
C5209	B	C	3A
C5210	B	C	3A
C5211	A	C	2A
C5212	A	C	2A
C5213	A	C	3A
C5214	A	C	3A
C5215	A	C	3A
C5216	A	C	3A
C5217	B	C	4A
CONNECTOR			
CN801	A	C	5B
CN802	A	D	3A
CN803	B	C	1A
DIODE			
D4101	A	C	2A
D5201	A	C	2A
IC			
IC4101	B	C	1A
IC4102	B	C	1A
IC4201	B	C	5B
IC4202	B	C	4B
IC5001	B	C	2A
COIL			
L4101	A	C	1A
L4102	B	C	1A
L4103	A	C	1A
L4104	A	C	1A
L4201	A	C	4B
L4202	B	C	4B
L4203	A	C	5B
L4204	A	C	4B
L5001	A	C	1A
L5002	B	C	1A
L5201	A	C	2A
L5202	A	C	2A
L5203	A	C	2A
L5204	A	C	2A
TRANSISTOR			
Q4101	A	C	1A
Q5201	B	C	3A
Q5202	B	C	3A
RESISTOR			
R4101	A	C	2A
R4102	A	C	2A
R4103	A	C	1A
R4104	A	C	1A
R4105	A	C	1A
R4202	A	C	5B
R4203	B	C	4B
R4204	B	C	4B
R4205	B	C	4B
R4206	A	C	5B
R4207	A	C	5B
R4208	B	C	4B
R4209	B	C	4B
R4210	A	C	4B
R4211	A	C	4B
R4212	A	C	4B
R4213	A	C	4B
R4214	A	C	4B
R5003	B	C	2A
R5004	B	C	2A
R5005	B	C	2A
R5006	B	C	2A
R5007	B	C	2A
R5008	B	C	2A
R5009	B	C	2A
R5010	B	C	2A
R5011	B	C	2B
R5012	B	C	2B
R5013	B	C	3A
R5014	B	C	2A
R5015	B	C	2A
R5016	A	C	1A
R5017	A	C	2A
R5018	A	C	2A
R5019	A	C	2A
R5020	B	C	1A
R5021	A	C	2A
R5022	A	C	2B
R5023	A	C	2B
R5025	B	C	1A
R5026	B	C	1A
R5027	A	C	1A
R5028	A	C	1A
R5029	B	C	2B
R5201	B	C	3A
R5202	B	C	3A
R5203	B	C	3A
R5204	B	C	3A
R5205	B	C	3A
R5206	B	C	3A
R5207	B	C	3A
R5208	B	C	3A
R5210	A	C	2A

4.36 PRE/REC CIRCUIT BOARD

FOIL SIDE (B)



COMPONENT SIDE (A)

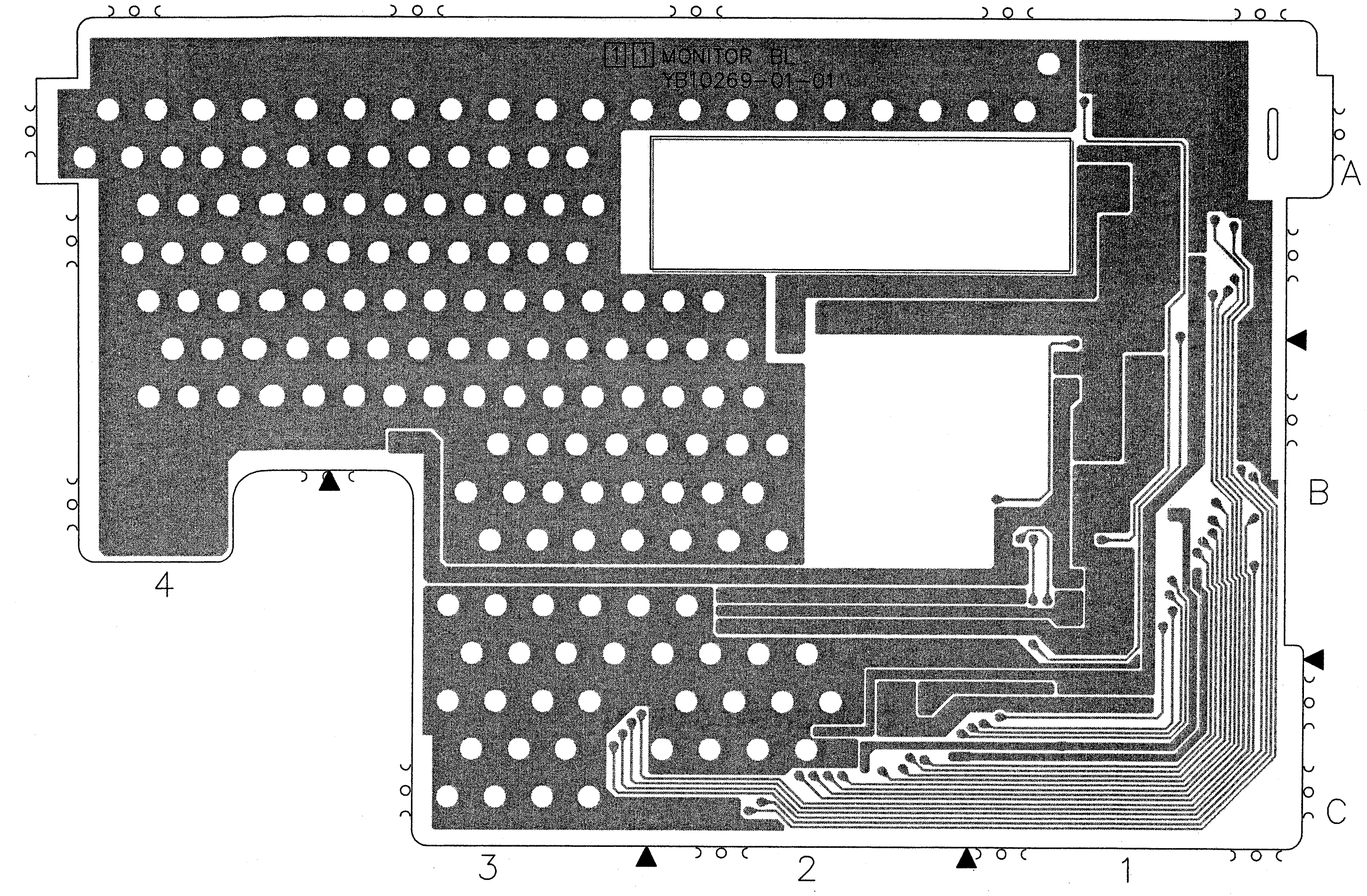


COMPONENT PARTS LOCATION GUIDE (PRE/REC)

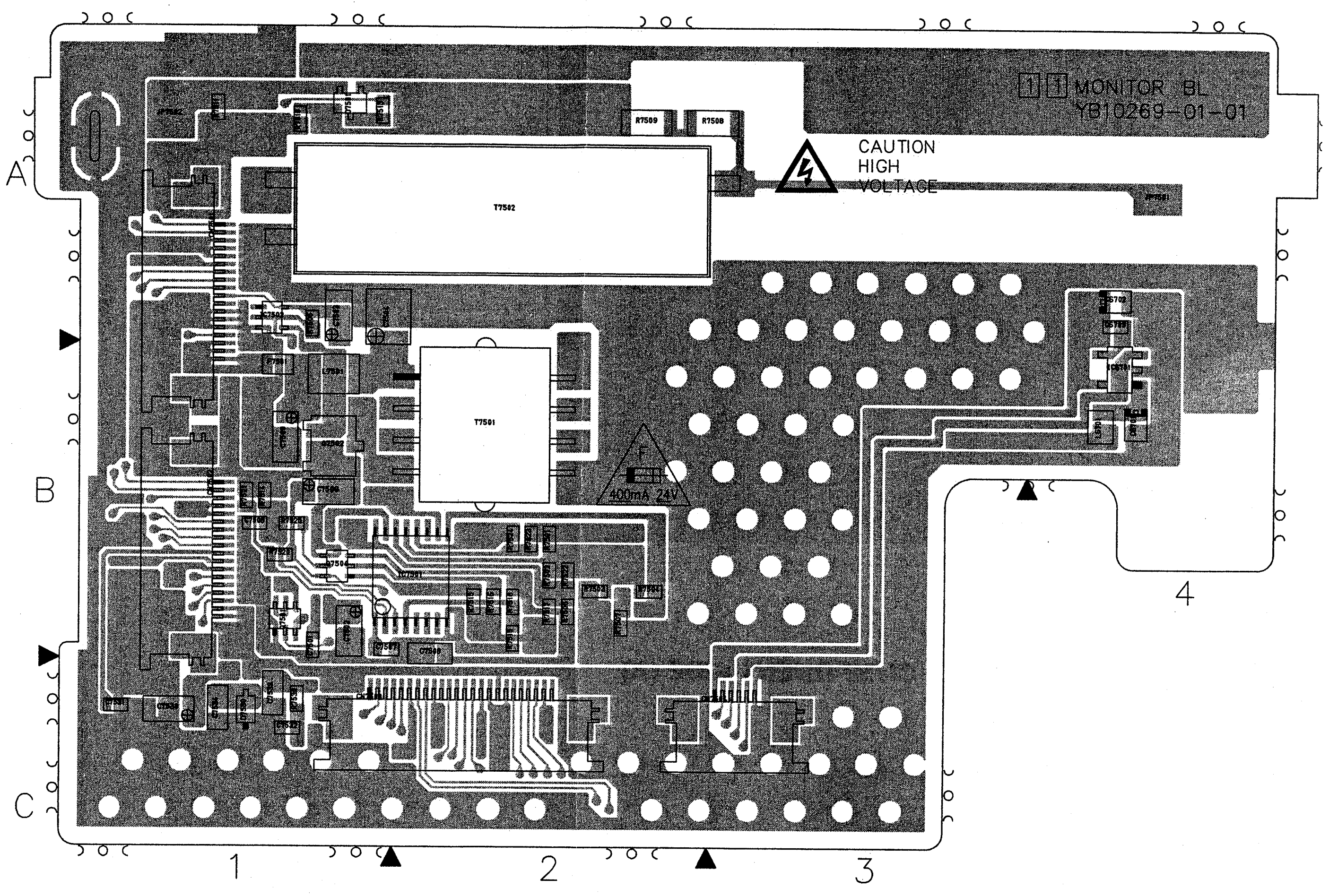
REF.No.	LOCATION		
CAPACITOR			
C3501	A	C	5A
C3502	A	C	5A
C3503	A	C	5A
C3504	B	C	5A
C3505	B	C	5A
C3506	A	C	5B
C3507	A	C	5B
C3508	A	C	5C
C3509	A	C	5B
C3510	A	C	6C
C3511	A	C	6C
C3512	A	C	5C
C3513	A	C	6B
C3514	A	C	5C
C3515	A	C	6B
C3516	A	C	6B
C3517	A	C	6B
C3518	A	C	6B
C3519	A	C	6A
C3520	A	C	6A
C3521	A	C	6A
C3522	A	C	5A
C3523	A	C	5A
C3524	A	C	5A
C3525	A	C	5A
C3526	A	C	6A
C3527	A	C	5B
C3528	A	C	5C
C3529	A	C	5C
CONNECTOR			
CN901	A	C	6C
CN902	B	C	1B
IC			
IC3501	A	C	5A
COIL			
L3501	A	C	5B
L3502	A	C	6B
L3503	B	C	5B
L3504	A	C	5B
TRANSISTOR			
Q3501	A	C	5C
Q3502	A	C	6C
Q3503	A	C	6C
Q3504	A	C	6B
RESISTOR			
R3501	A	C	5A
R3502	B	C	5A
R3503	B	C	5A
R3504	B	C	5A
R3505	A	C	5B
R3506	A	C	5C
R3507	A	C	5C
R3508	A	C	5C
R3509	A	C	5C
R3510	A	C	6B
R3511	A	C	6B
R3512	A	C	6B
R3513	A	C	6B
R3514	A	C	6B
R3515	A	C	6A
R3516	B	C	5A

4.37 MONITOR BL CIRCUIT BOARD

FOIL SIDE (B)


MONITOR BL
YB10269-01-01
A
B
C
1
2
3
4

COMPONENT SIDE (A)


MONITOR BL
YB10269-01-01
CAUTION
HIGH
VOLTAGE
T7502
T7501
400mA 24V
A
B
C
1
2
3
4

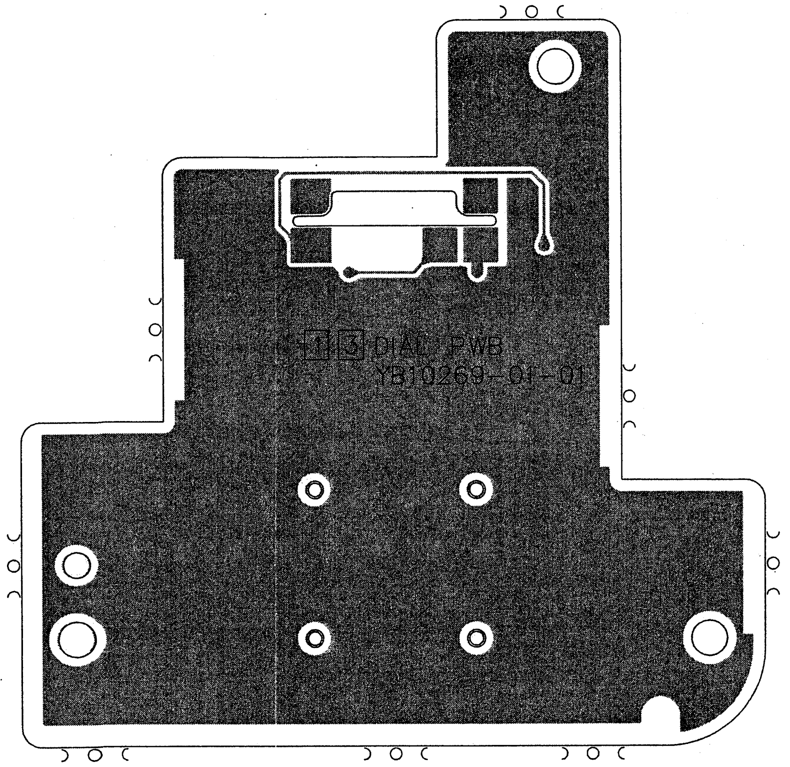
COMPONENT PARTS LOCATION GUIDE (MONITOR BL)

REF.No.	LOCATION		
CAPACITOR			
C6701	A	C	4B
C6702	A	C	4A
C6703	A	C	4A
C7501	A	C	1B
C7502	A	C	1B
C7503	A	C	1A
C7504	A	C	1A
C7505	A	C	1B
C7506	A	C	1B
C7507	A	C	1B
C7508	A	C	2B
C7509	A	C	1B
C7530	A	C	1C
C7531	A	C	1C
C7532	A	C	1C
C7533	A	C	1C
C7534	A	C	1C
CONNECTOR			
CN1301	A	C	4B
CN7501	A	C	1A
CN7502	A	C	1B
CN7503	A	C	1C
CN7504	A	C	3C
DIODE			
D6701	A	C	4B
D7501	A	C	1A
D7530	A	C	1C
IC			
IC6701	A	C	4B
IC7501	A	C	2B
IC7502	A	C	1A
COIL			
L6701	A	C	4B
L7501	A	C	1B
TRANSISTOR			
Q6701	A	C	4C
Q6702	A	C	4B
Q7501	A	C	1B
Q7502	A	C	1B
Q7504	A	C	1B
RESISTOR			
R6703	A	C	4C
R6704	A	C	4B
R6751	A	C	4C
R6752	A	C	4C
R6753	A	C	4C
R6754	A	C	4C
R6755	A	C	4C
R7501	A	C	2B
R7502	A	C	2B
R7503	A	C	2B
R7504	A	C	2B
R7505	A	C	1A
R7506	A	C	2B
R7507	A	C	2B
R7508	A	C	3A
R7509	A	C	2A
R7510	A	C	1A
R7511	A	C	1A
R7513	A	C	1A
R7514	A	C	1B
R7515	A	C	2B
R7516	A	C	2B
R7517	A	C	2B
R7518	A	C	2B
R7519	A	C	2B
R7520	A	C	1B
R7521	A	C	1B
R7522	A	C	2B
R7523	A	C	2B
R7524	A	C	2B
R7525	A	C	1B
R7530	A	C	1C
OTHER			
F7501	A	C	1B
S6751	A	C	4C
T7501	A	C	2B
T7502	A	C	2A

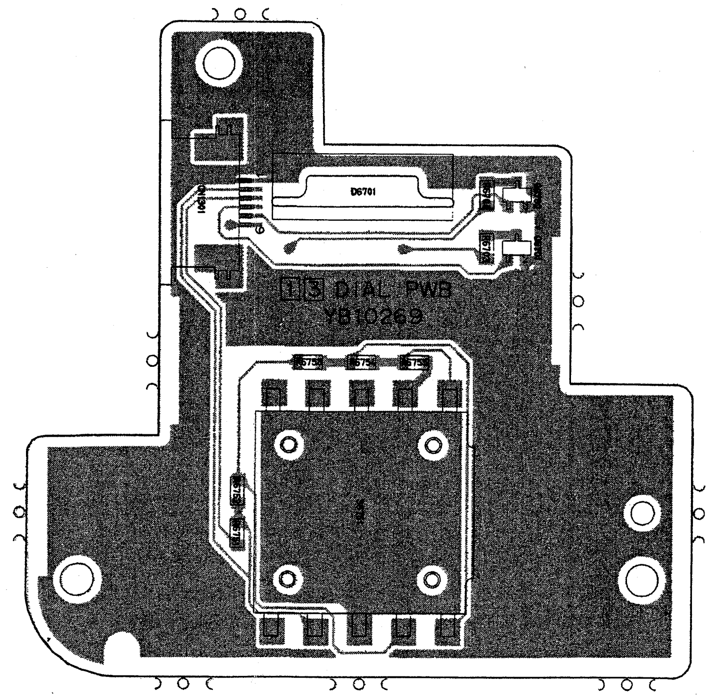
4.38 DIAL AND MPL CIRCUIT BOARDS

-DIAL-

FOIL SIDE (B)

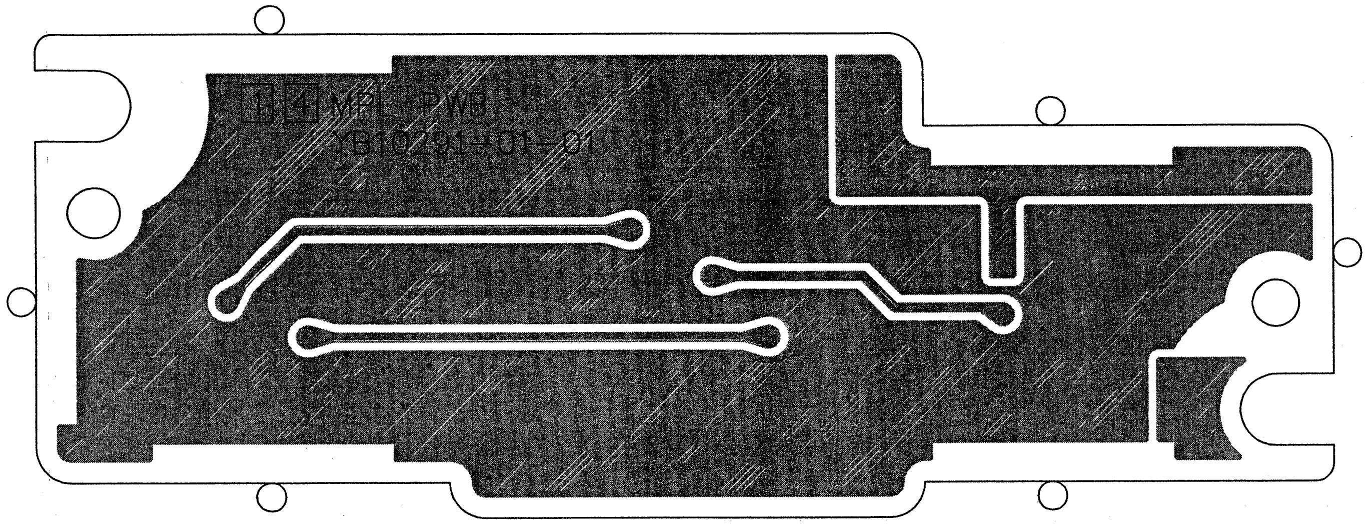

1 3 DIAL PWB
YB10269-01-01

COMPONENT SIDE (A)

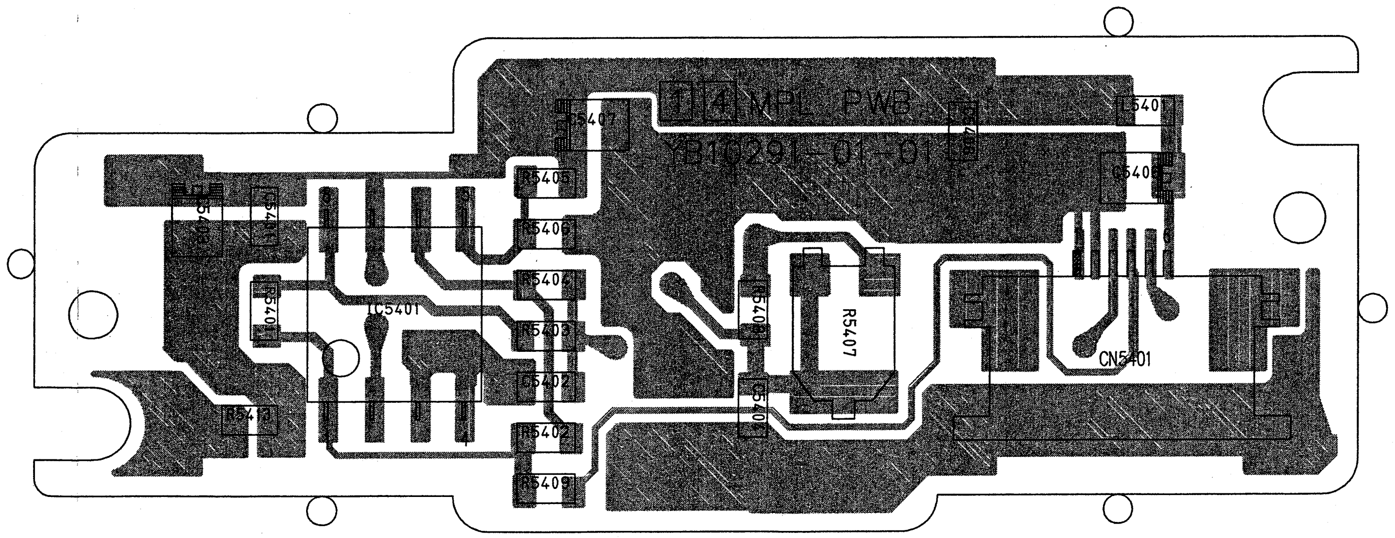

D6701
1 3 DIAL PWB
YB10269

-MPL-

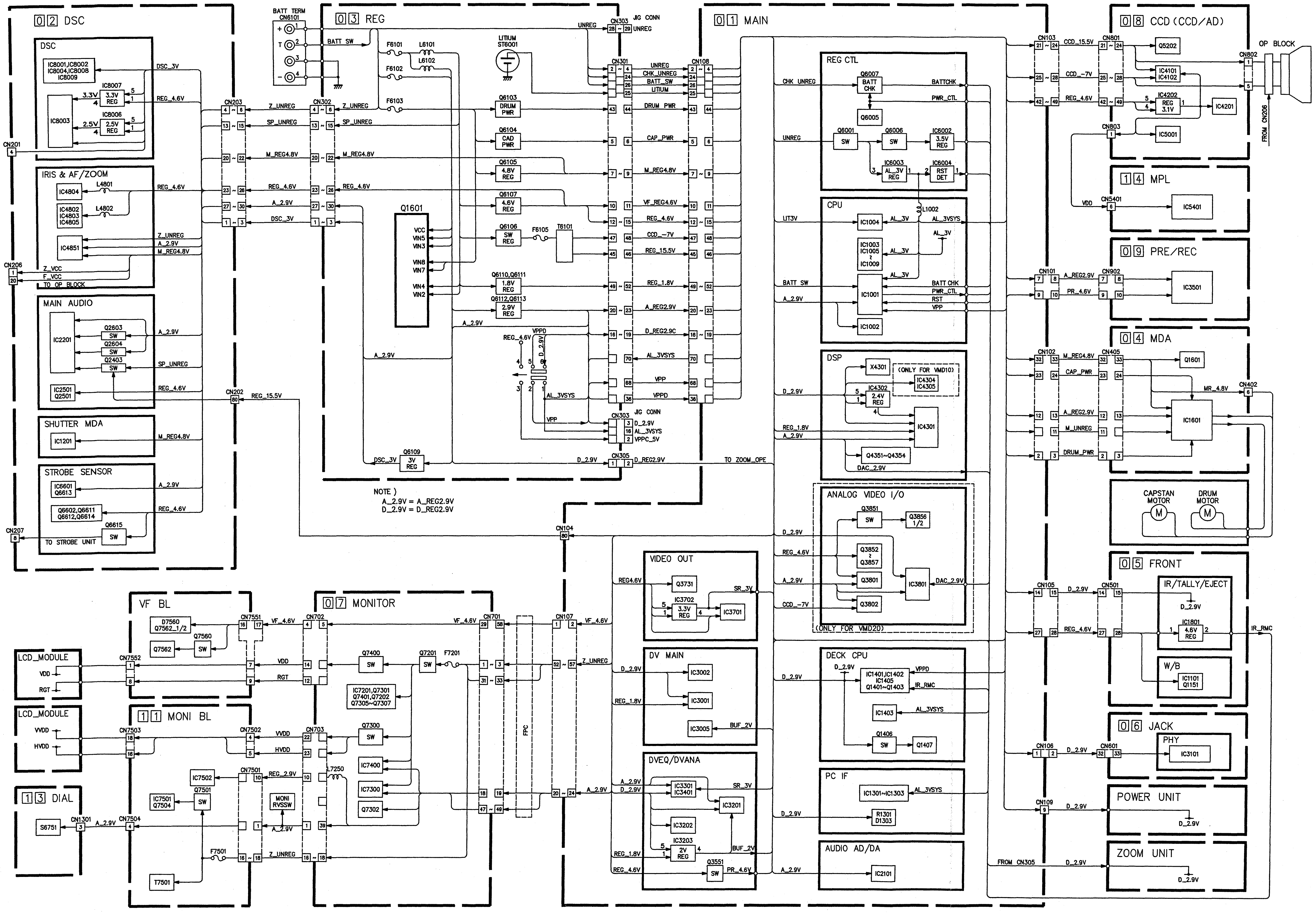
FOIL SIDE (B)


1 4 MPL PWB
YB10291-01-01

COMPONENT SIDE (A)

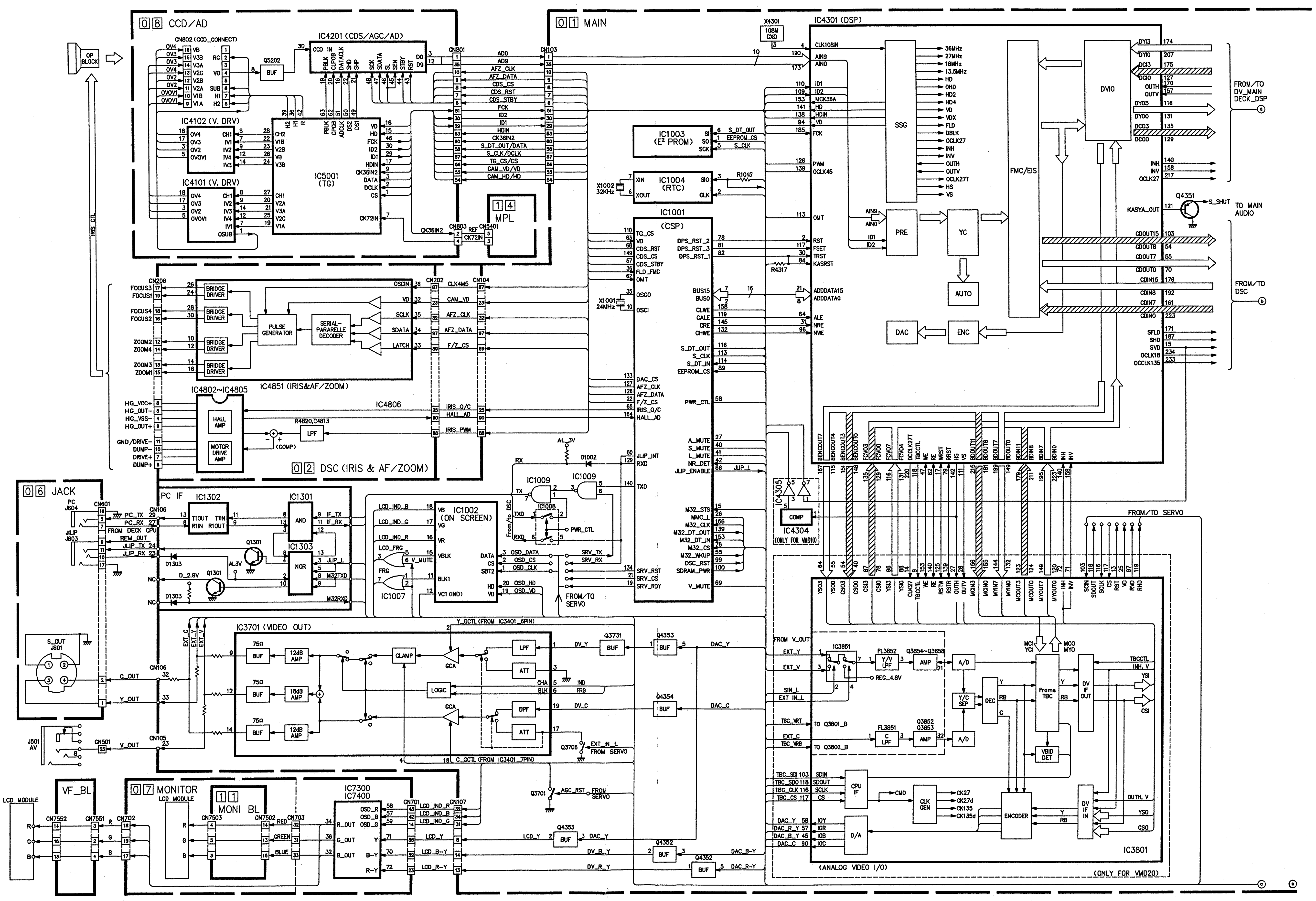

1 4 MPL PWB
YB10291-01-01
C5407
L5401
C5406
R5405
R5406
R5404
R5403
C5402
R5402
R5409
R5401
IC5401
R5413
R5408
C5401
R5407
CN5401

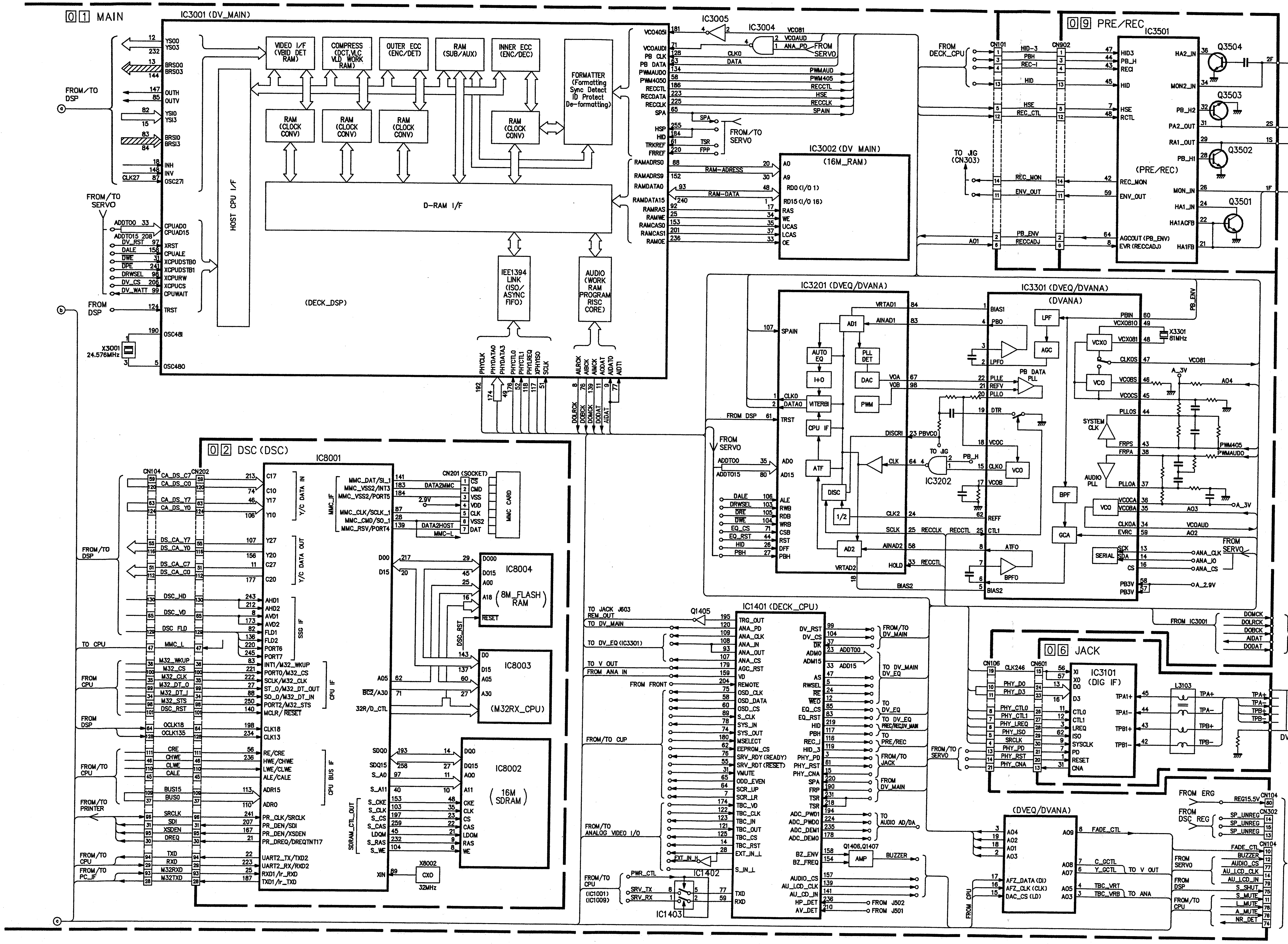
4.39 POWER SYSTEM BLOCK DIAGRAM



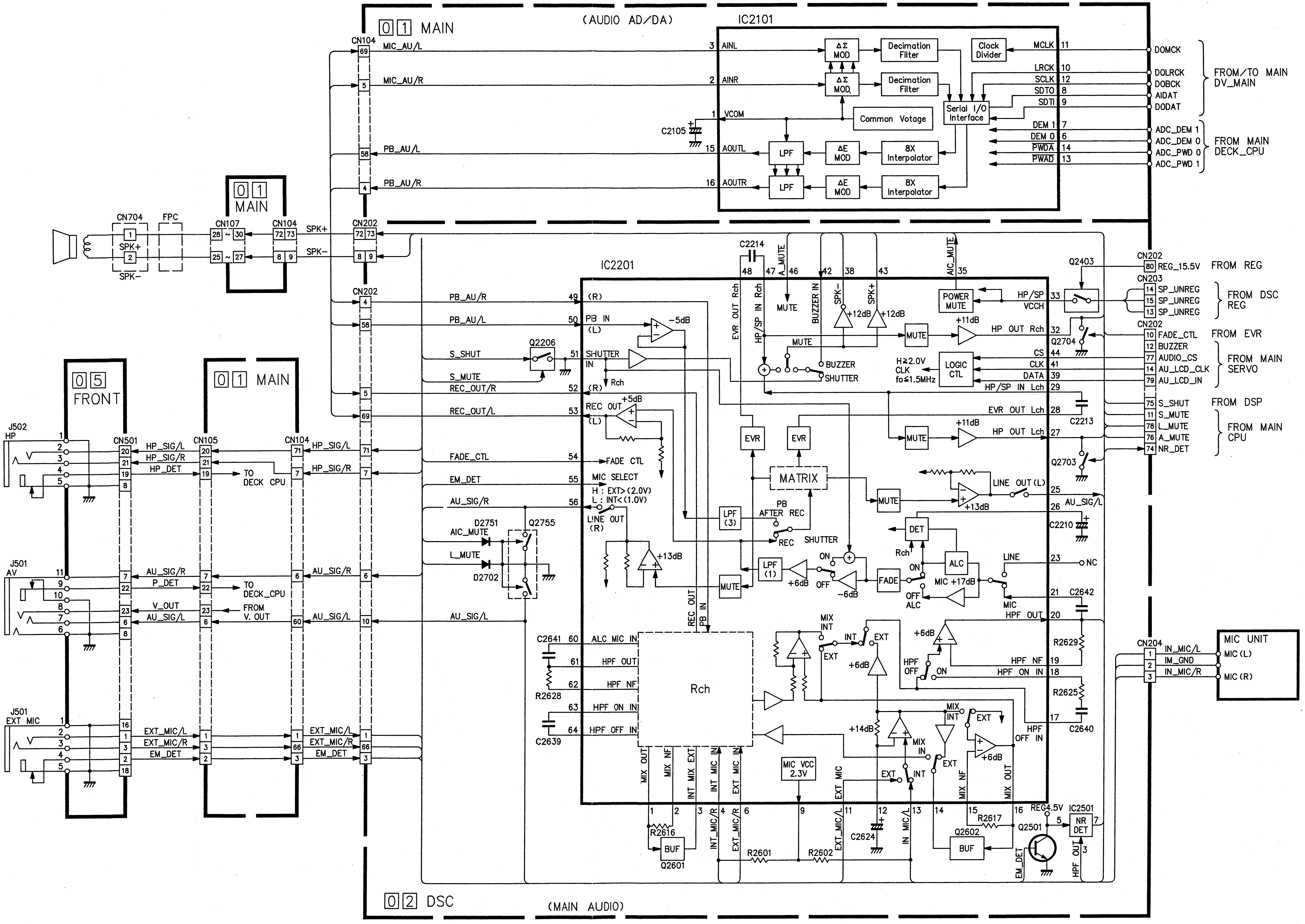
02 DSC
DSC
IC8001,IC8002 IC8004,IC8008 IC8009
IC8003
IC8007 3.3V REG
IC8006 2.5V REG
DSC_3V
REG_4.6V
IRIS & AF/ZOOM
IC4804
L4801
IC4802 IC4803 IC4805
L4802
IC4851
Z_UNREG
A_2.9V
M_REG4.8V
Z_VCC
F_VCC
TO OP BLOCK
MAIN AUDIO
IC2201
Q2603 SW
Q2604 SW
Q2403 SW
SP_UNREG
IC2501 Q2501
SHUTTER MDA
IC1201
STROBE SENSOR
IC6601 Q6613
Q6602,Q6611 Q6612,Q6614
Q6615 SW
TO STROBE UNIT
CN201
CN206
CN207
CN202
REG_15.5V
CN203
BATT TERM CN6101
BATT SW
03 REG
F6101
L6101
L6102
F6102
F6103
LITIUM ST6001
Q6103 DRUM PWR
Q6104 CAD PWR
Q6105 4.8V REG
Q6107 4.6V REG
Q6106 SW REG
F6105
T6101
Q6110,Q6111 1.8V REG
Q6112,Q6113 2.9V REG
Q1601
VCC VIN5 VIN3 VIN8 VIN7 VIN4 VIN2
Q6109 3V REG
CN302
JIG CONN
CN303
CN301
CN305
UNREG
CHK_UNREG
BATT_SW
LITIUM
DRUM_PWR
CAP_PWR
M_REG4.8V
VF_REG4.6V
REG_4.6V
CCD_-7V
REG_15.5V
REG_1.8V
A_REG2.9V
D_REG2.9C
AL_3VSYS
VPP
VPPD
VPPC_5V
D_2.9V
D_REG2.9V
TO ZOOM_OPE
NOTE)
A_2.9V = A_REG2.9V
D_2.9V = D_REG2.9V
01 MAIN
CN108
REG CTL
Q6007 BATT CHK
Q6005
Q6001 SW
Q6006 SW
IC6002 3.5V REG
IC6003 AL_3V REG
IC6004 RST DET
BATTCHK
PWR_CTL
CPU
IC1004
L1002
IC1003 IC1005 IC1009
IC1001
IC1002
RST
DSP
X4301
(ONLY FOR VMD10)
IC4304 IC4305
IC4302 2.4V REG
IC4301
Q4351~Q4354
DAC_2.9V
ANALOG VIDEO I/O
Q3851 SW
Q3856 1/2
Q3852 Q3857
Q3801
Q3802
IC3801
(ONLY FOR VMD20)
CN104
VIDEO OUT
Q3731
IC3702 3.3V REG
IC3701
SR_3V
DV MAIN
IC3002
IC3001
IC3005
BUF_2V
DVEQ/DVANA
IC3301 IC3401
IC3201
IC3202
IC3203 2V REG
Q3551 SW
PR_4.6V
DECK CPU
IC1401,IC1402 IC1405 Q1401~Q1403
IR_RMC
IC1403
Q1406 SW
Q1407
PC IF
IC1301~IC1303
R1301 D1303
AUDIO AD/DA
IC2101
08 CCD (CCD/AD)
CN103
CN801
CCD_15.5V
Q5202
IC4101 IC4102
IC4202 REG 3.1V
IC4201
CN803
IC5001
CN802
OP BLOCK
FROM CN206
14 MPL
CN5401
VDD
IC5401
09 PRE/REC
CN101
CN902
A_REG2.9V
PR_4.6V
IC3501
04 MDA
CN102
CN405
Q1601
MR_4.8V
CN402
IC1601
M_UNREG
DRUM_PWR
CAPSTAN MOTOR
DRUM MOTOR
M
05 FRONT
CN105
CN501
IR/TALLY/EJECT
IC1801 4.6V REG
W/B
IC1101 Q1151
06 JACK
CN106
CN601
PHY
IC3101
CN109
POWER UNIT
FROM CN305
ZOOM UNIT
VF BL
D7560 Q7562_1/2
Q7560 SW
Q7562
CN7551
VF_4.6V
VDD
RGT
LCD_MODULE
CN7552
VVDD
HVDD
CN7503
11 MONI BL
CN7502
IC7502
CN7501
Q7501 SW
IC7501 IC7504
MONI RVSSW
F7501
T7501
13 DIAL
S6751
CN1301
CN7504
07 MONITOR
CN702
CN703
Q7400 SW
Q7201 SW
F7201
IC7201,Q7301 Q7401,Q7202 Q7305~Q7307
Q7300 SW
IC7400
IC7300
Q7302
L7250
REG_2.9V
CN701
FPC
CN107

4.40 VIDEO SYSTEM BLOCK DIAGRAM


08 CCD/AD
OP BLOCK
CN802 (CCD_CONNECT)
IC4201 (CDS/AGC/AD)
Q5202
BUF
IC4102 (V. DRV)
IC4101 (V. DRV)
IC5001 (TG)
CN801
CN803
CN5401
14 MPL
01 MAIN
CN103
X4301 108M CXO
IC4301 (DSP)
SSG
FMC/EIS
DVIO
PRE
YC
AUTO
DAC
ENC
IC1003 (E² PROM)
IC1004 (RTC)
X1C02 32KHz
IC1001 (CSP)
X1001 24MHz
R4317
R1045
Q4351
S_SHUT
TO MAIN AUDIO
KASYA_OUT
FROM/TO DV_MAIN DECK_DSP
FROM/TO DSC
IRIS CTL
CN206
CN202
CN104
BRIDGE DRIVER
PULSE GENERATOR
SERIAL-PARARELLE DECODER
IC4851 (IRIS&AF/ZOOM)
IC4802~IC4805
IC4806
HALL AMP
MOTOR DRIVE AMP
LPF
R4820,C4813
(COMP)
02 DSC (IRIS & AF/ZOOM)
FOCUS3
FOCUS1
FOCUS4
FOCUS2
ZOOM2
ZOOM4
ZOOM3
ZOOM1
HG_VCC+
HG_OUT-
HG_VSS-
HG_OUT+
GND/DRIVE-
DUMP-
DRIVE+
DUMP+
06 JACK
PC J604
JLIP J603
CN601
S_OUT J601
J501 AV
CN501
PC IF
IC1302
IC1301
AND
IC1303
NOR
Q1301
D1303
CN106
CN105
IC1009
IC1008
D1002
PWR_CTL
IC1002 (ON SCREEN)
IC1007
FROM/TO SERVO
IC4305
IC4304
COMP
(ONLY FOR VMD10)
IC3701 (VIDEO OUT)
75Ω
BUF
12dB AMP
18dB AMP
CLAMP
GCA
LPF
ATT
BPF
LOGIC
Q3731
Q4353
Q4354
Q3706
Q3701
Y_GCTL (FROM IC3401_6PIN)
C_GCTL (FROM IC3401_7PIN)
EXT_IN_L FROM SERVO
AGC_RST FROM SERVO
FROM V_OUT
IC3851
FL3852
Y/V LPF
Q3854~Q3858
AMP
A/D
REG_4.8V
Y/C SEP
DEC
Frame TBC
DV IF OUT
FL3851
C LPF
Q3852 Q3853
VBID DET
CPU IF
CMD
CLK GEN
ENCODER
D/A
DV IF IN
IC3801
(ANALOG VIDEO I/O)
(ONLY FOR VMD20)
LCD MODULE
VF_BL
CN7552
CN7551
CN702
07 MONITOR
11 MONI BL
CN7503
CN7502
CN703
IC7300 IC7400
CN701
CN107
Q4352
BUF

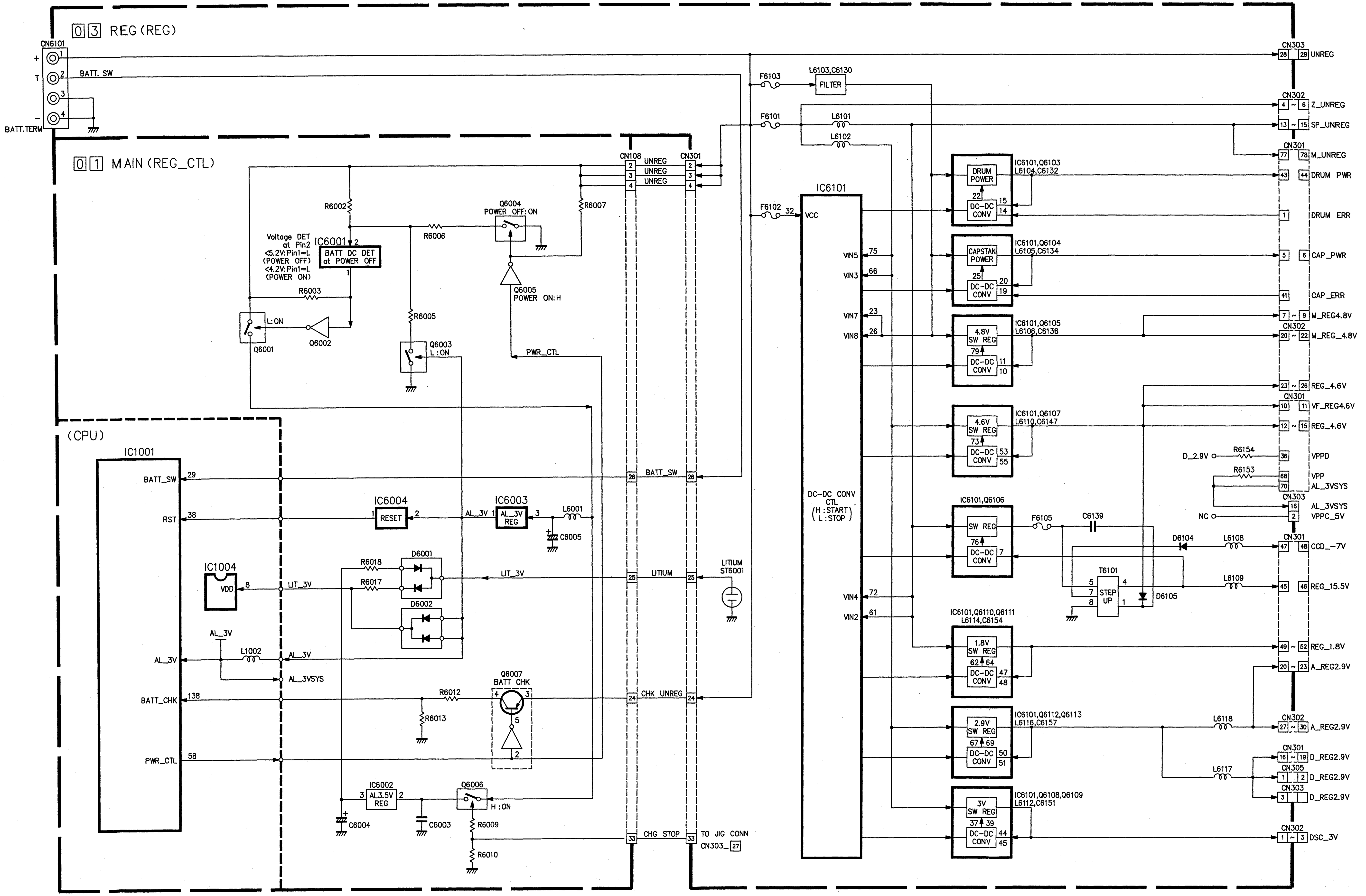

01 MAIN
IC3001 (DV_MAIN)
VIDEO I/F (VBID DET RAM)
COMPRESS (DCT,VLC VLD WORK RAM)
OUTER ECC (ENC/DET)
RAM (SUB/AUX)
INNER ECC (ENC/DEC)
FORMATTER (Formatting Sync Detect ID Protect De-formatting)
RAM (CLOCK CONV)
HOST CPU I/F
D-RAM I/F
IEE1394 LINK (ISO/ASYNC FIFO)
AUDIO (WORK RAM PROGRAM RISC CORE)
(DECK_DSP)
FROM/TO DSP
FROM/TO SERVO
FROM DSP
X3001 24.576MHz
IC3005
IC3004
IC3002 (DV MAIN) (16M_RAM)
09 PRE/REC
IC3501
(PRE/REC)
Q3504
Q3503
Q3502
Q3501
HEAD
CN901
FROM DECK_CPU
TO JIG (CN303)
IC3201 (DVEQ/DVANA)
IC3301 (DVEQ/DVANA) (DVANA)
IC3202
X3301 81MHz
FROM SERVO
02 DSC (DSC)
IC8001
Y/C DATA IN
Y/C DATA OUT
SSG IF
CPU IF
CPU BUS IF
SDRAM_CTL_OUT
MMC_IF
CN201 (SOCKET)
MMC CARD
IC8004 (8M_FLASH RAM)
IC8003 (M32RX_CPU)
IC8002 (16M SDRAM)
X8002 CXO 32MHz
FROM/TO DSP
TO CPU
FROM CPU
FROM DSP
FROM/TO CPU
FROM/TO PRINTER
FROM/TO PC_IF
IC1401 (DECK_CPU)
Q1405
IC1402
IC1403
Q1406,Q1407
AMP
BUZZER
TO JACK J603
FROM/TO CUP
FROM/TO ANALOG VIDEO I/O
FROM/TO CPU (IC1001) (IC1009)
FROM/TO MAIN AUDIO AD/DA
06 JACK
IC3101 (DIG IF)
L3103
J602
DV I/O
(DVEQ/DVANA)
FROM ERG
FROM DSC REG
FROM SERVO
FROM DSP
FROM/TO CPU
FROM/TO DSC MAIN AUDIO

4.41 AUDIO SYSTEM BLOCK DIAGRAM



01 MAIN
(AUDIO AD/DA)
IC2101
CN104
MIC_AU/L
MIC_AU/R
PB_AU/L
PB_AU/R
AINL
AINR
VCOM
AOUTL
AOUTR
C2105
ΔΣ MOD
Decimation Filter
Clock Divider
Common Votage
Serial I/O Interface
LPF
ΔE MOD
8X Interpolator
MCLK
LRCK
SCLK
SDTO
SDTI
DEM 1
DEM 0
PWDA
PWAD
DOMCK
DOLRCK
DOBCK
AIDAT
DODAT
FROM/TO MAIN DV_MAIN
ADC_DEM 1
ADC_DEM 0
ADC_PWD 0
ADC_PWD 1
FROM MAIN DECK_CPU
CN704
FPC
CN107
CN202
SPK+
SPK-
IC2201
C2214
A_MUTE
AIC_MUTE
PB_AU/R
PB_AU/L
S_SHUT
S_MUTE
REC_OUT/R
REC_OUT/L
FADE_CTL
EM_DET
AU_SIG/R
AU_SIG/L
Q2206
D2751
D2702
Q2755
L_MUTE
PB IN
SHUTTER IN
REC OUT
FADE CTL
MIC SELECT
H : EXT>(2.0V)
L : INT<(1.0V)
LINE OUT (R)
-5dB
+5dB
+13dB
Rch
EVR OUT Rch
HP/SP IN Rch
MUTE
BUZZER IN
BUZZER
SHUTTER
+12dB
POWER MUTE
HP/SP
VCCH
HP OUT Rch
+11dB
LOGIC CTL
H≥2.0V
CLK
fo≤1.5MHz
CS
CLK
DATA
HP/SP IN Lch
EVR OUT Lch
HP OUT Lch
EVR
MATRIX
LPF (3)
LPF (1)
PB AFTER REC
REC
ON
OFF
+6dB
-6dB
FADE
DET
ALC
MIC +17dB
OFF ALC
LINE OUT (L)
LINE
MIC
MIC HPF OUT
HPF NF
HPF ON IN
HPF OFF IN
MIX INT
INT
EXT
HPF OFF
+14dB
MIX IN
MIC VCC 2.3V
ALC MIC IN
HPF OUT
HPF NF
HPF ON IN
HPF OFF IN
MIX OUT
MIX NF
INT MIX EXT
INT MIC IN
EXT MIC IN
EXT MIC
MIX NF
MIX OUT
INT_MIC/R
EXT_MIC/R
EXT_MIC/L
IN MIC/L
C2641
C2639
R2628
R2616
Q2601
BUF
R2601
R2602
C2624
R2617
Q2602
Q2501
REG4.5V
IC2501
NR DET
EM_DET
HPF OUT
Q2403
Q2704
Q2703
C2213
C2210
C2642
R2629
R2625
C2640
NC
REG_15.5V
FROM REG
CN203
SP_UNREG
FROM DSC REG
FADE_CTL
FROM EVR
BUZZER
AUDIO_CS
AU_LCD_CLK
AU_LCD_IN
FROM MAIN SERVO
S_SHUT
FROM DSP
S_MUTE
L_MUTE
A_MUTE
NR_DET
FROM MAIN CPU
CN204
IN_MIC/L
IM_GND
IN_MIC/R
MIC UNIT
MIC (L)
MIC (R)
05 FRONT
J502
HP
CN501
CN105
HP_SIG/L
HP_SIG/R
HP_DET
TO DECK CPU
J501
AV
AU_SIG/R
P_DET
V_OUT
AU_SIG/L
FROM V. OUT
EXT MIC
EXT_MIC/L
EXT_MIC/R
EM_DET
02 DSC
(MAIN AUDIO)

4.42 REGULATOR SYSTEM BLOCK DIAGRAM


03 REG (REG)
01 MAIN (REG_CTL)
(CPU)
CN6101
+
T
–
BATT.TERM
BATT. SW
IC1001
BATT_SW
RST
AL_3V
BATT_CHK
PWR_CTL
29
38
138
58
IC1004
VDD
8
LIT_3V
AL_3V
L1002
AL_3VSYS
R6002
R6003
R6005
R6006
R6007
Voltage DET at Pin2
<5.2V: Pin1=L (POWER OFF)
<4.2V: Pin1=L (POWER ON)
IC6001
BATT DC DET at POWER OFF
L: ON
Q6001
Q6002
Q6003 L: ON
Q6004 POWER OFF: ON
Q6005 POWER ON: H
PWR_CTL
IC6004
RESET
IC6003
AL_3V REG
AL_3V
L6001
C6005
R6018
R6017
D6001
D6002
LIT_3V
Q6007 BATT CHK
R6012
R6013
IC6002
AL3.5V REG
C6004
C6003
Q6006
H: ON
R6009
R6010
CN108
CN301
UNREG
UNREG
UNREG
BATT_SW
LITIUM
CHK UNREG
CHG STOP
LITIUM ST6001
TO JIG CONN CN303_27
F6103
L6103,C6130
FILTER
F6101
L6101
L6102
F6102
IC6101
VCC
VIN5
VIN3
VIN7
VIN8
VIN4
VIN2
DC-DC CONV CTL (H: START / L: STOP)
IC6101,Q6103 L6104,C6132
DRUM POWER
DC-DC CONV
IC6101,Q6104 L6105,C6134
CAPSTAN POWER
IC6101,Q6105 L6106,C6136
4.8V SW REG
IC6101,Q6107 L6110,C6147
4.6V SW REG
IC6101,Q6106
SW REG
F6105
C6139
D6104
L6108
T6101
STEP UP
D6105
L6109
IC6101,Q6110,Q6111 L6114,C6154
1.8V SW REG
IC6101,Q6112,Q6113 L6116,C6157
2.9V SW REG
L6118
L6117
IC6101,Q6108,Q6109 L6112,C6151
3V SW REG
D_2.9V
R6154
R6153
NC
CN303 28 29 UNREG
CN302 4 ~ 6 Z_UNREG
13 ~ 15 SP_UNREG
CN301 77 78 M_UNREG
43 44 DRUM PWR
1 DRUM ERR
5 6 CAP_PWR
41 CAP_ERR
7 ~ 9 M_REG4.8V
CN302 20 ~ 22 M_REG_4.8V
23 ~ 26 REG_4.6V
CN301 10 11 VF_REG4.6V
12 ~ 15 REG_4.6V
36 VPPD
68 VPP
70 AL_3VSYS
CN303 16 AL_3VSYS
2 VPPC_5V
CN301 47 48 CCD_–7V
45 46 REG_15.5V
49 ~ 52 REG_1.8V
20 ~ 23 A_REG2.9V
CN302 27 ~ 30 A_REG2.9V
CN301 16 ~ 19 D_REG2.9V
CN305 1 2 D_REG2.9V
CN303 3 D_REG2.9V
CN302 1 ~ 3 DSC_3V

4.43 VOLTAGE CHARTS

Note: Parts whose data cannot be obtained (for example, CSP IC, etc.) are omitted from the following chart in some cases.

<CPU>

MODE PIN NO.	REC	PLAY
IC1002		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
IC1003		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
IC1004		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
IC1005		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
IC1006		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
IC1007		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
IC1008		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
IC1009		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-

<DV MAIN>

MODE PIN NO.	REC	PLAY
IC3004		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
IC3005		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-

<DVEQ/DVANA>

MODE PIN NO.	REC	PLAY
IC3202		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
IC3203		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
IC3301		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-
39	-	-
40	-	-
41	-	-
42	-	-
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	-	-
49	-	-
50	-	-
51	-	-
52	-	-
53	-	-
54	-	-
55	-	-
56	-	-
57	-	-
58	-	-
59	-	-
60	-	-
61	-	-
62	-	-
63	-	-
64	-	-
IC3401		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
Q3551		
E	-	-
C	-	-
B	-	-
Q3552		
E	-	-
C	-	-
B	-	-

<VIDEO OUT>

MODE PIN NO.	REC	PLAY
IC3701		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
IC3702		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
Q3701		
E	0	0
C	0	0
B	2.9	2.9
Q3705		
E	0	0
C	4.8	4.7
B	0	0
Q3706		
E	0	0
C	0	0
B	3	2.9
Q3731		
E	-	-
C	-	-
B	-	-

<ANALOG VIDEO I/O>

MODE PIN NO.	REC	PLAY
IC3851		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
Q3801		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
Q3802		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
Q3851		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
Q3852		
1	0	0
2	0	0
3	0	0
4	4.8	0
5	4.8	4.8
6	4.8	4.8
Q3853		
E	-	-
C	-	-
B	-	-
Q3854		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
Q3855		
E	-	-
C	-	-
B	-	-
Q3856		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
Q3857		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
Q3858		
E	-	-
C	-	-
B	-	-

<DSP>

MODE PIN NO.	REC	PLAY
IC4302		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
IC4303		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
IC4304		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
IC4305		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
Q4351		
E	-	-
C	-	-
B	-	-
Q4352		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
Q4353		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
Q4354		
E	-	-
C	-	-
B	-	-

<AUDIO AD/DA>

MODE PIN NO.	REC	PLAY
IC2101		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-

<REG CTL>

MODE PIN NO.	REC	PLAY
IC2201		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-
39	-	-
40	-	-
41	-	-
42	-	-
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	-	-
49	-	-
50	-	-
51	-	-
52	-	-
53	-	-
54	-	-
55	-	-
56	-	-
57	-	-
58	-	-
59	-	-
60	-	-
61	-	-
62	-	-
63	-	-
64	-	-
IC2501		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
Q2403		
E	5.4	0
C	6.7	6.7
B	6.1	6
Q2501		
E	-	-
C	-	-
B	-	-
Q2603		
E	-	-
C	-	-
B	-	-
Q2604		
E	-	-
C	-	-
B	-	-
Q2703		
E	-	-
C	-	-
B	-	-
Q2704		
E	-	-
C	-	-
B	-	-
Q2705		
E	-	-
C	-	-
B	-	-
Q2755		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0

<SHUTTER MDA>

MODE PIN NO.	REC	PLAY
IC1201		
1	0.3	-
2	4.9	4.9
3	4.9	4.9
4	0	-
5	0	0
6	0.9	3
7	1.5	-
8	0	0

<MAIN AUDIO>

MODE PIN NO.	REC	PLAY
IC2201		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-
39	-	-
40	-	-
41	-	-
42	-	-
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	-	-
49	-	-
50	-	-
51	-	-
52	-	-
53	-	-
54	-	-
55	-	-
56	-	-
57	-	-
58	-	-
59	-	-
60	-	-
61	-	-
62	-	-
63	-	-
64	-	-
IC2501		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
Q2403		
E	5.4	0
C	6.7	6.7
B	6.1	6
Q2501		
E	-	-
C	-	-
B	-	-
Q2603		
E	-	-
C	-	-
B	-	-
Q2604		
E	-	-
C	-	-
B	-	-
Q2703		
E	-	-
C	-	-
B	-	-
Q2704		
E	-	-
C	-	-
B	-	-
Q2705		
E	-	-
C	-	-
B	-	-
Q2755		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0

<IRIS&AF/ZOOM>

MODE PIN NO.	REC	PLAY
IC4802		
1	3.9	0
2	3.8	0
3	2.2	2.1
4	0	0
5	0	2.1
6	0	2.2
7	2.1	2.2
8	4.8	4.8
IC4803		
1	1.1	0
2	0.4	0.4
3	0.4	0.4
4	0	0
5	3.9	3.7
6	2.1	2.2
7	3.4	3.5
8	4.8	4.8
IC4804		
1	0.7	0.7
2	2.3	2.4
3	2.2	2.2
4	0	0
5	0	2.2
6	1.7	1.7
7	4	0
8	4.7	4.7
IC4805		
1	0	0
2	3.2	3.2
3	0	0
4	0	0
5	2.1	2
6	2.5	2.4
7	2.1	2.1
8	4.8	4.8
IC4851		
1	0	0
2	0.5	0.4
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	3	3
9	6.7	6.7
10	3	0
11	0	0
12	3.1	0
13	6.7	6.8
14	2.9	0
15	0	0
16	3	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0.7	0
22	0	0
23	6.7	6.7
24	1.4	0
25	0	0
26	3.3	0
27	6.7	6.7
28	1.4	0.4
29	0	0
30	-	0
31	3	3
32	0	0
33	0	0
34	2.9	2.9
35	2.9	2.9
36	1.5	1.4
37	1.5	1.4
38	2.9	2.9
Q4803		
E	0.4	0.4
C	3.7	3.7
B	1.1	1.1
Q4851		
E	0	0
C	3.7	1
B	0	0

<STROBE SENSOR>

MODE PIN NO.	REC	PLAY
IC6601		
1	2.3	0
2	3	2.9
3	3	3
4	0	0
5	0	0
6	0	0
7	0	3
8	3	3
Q6601		
E	0	0
C	0.9	0
B	0	0
Q6602		
1	1.2	1.8
2	3.3	3.3
3	2.8	2.8
4	2.3	2.3
5	0	0
Q6611		
E	0.5	0.5
C	0.8	0
B	0	0
Q6612		
1	1.1	0
2	1.2	1
3	1.1	0
4	0	0
5	0	0
Q6613		
E	1.5	0
C	1.7	1.7
B	0	0
Q6614		
1	0	0
2	0	0
3	0	0
4	0.5	0.5
5	1.8	0
Q6615		
1	0.9	0
2	0	0
3	4.8	4.8
4	0.4	0
5	4.8	4.8

<DSC>

MODE PIN NO.	REC	PLAY
IC8004		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-
39	-	-
40	-	-
41	-	-
42	-	-
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	-	-
IC8006		
1	1.4	0
2	0	0
3	1.4	1.2
4	2.5	2.5
5	3	0
IC8007		
1	4.8	4.8
2	0	0
3	1.3	1.2
4	3.3	3.3
5	4.8	4.8
IC8008		
1	1.8	1.4
2	1.5	0
3	0	0
4	0	0
5	3	3
6	1.4	0
7	1.4	1.3
8	3	3
IC8009		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-

<REG>

MODE PIN NO.	REC	PLAY
IC6101		
1	0	0
2	0.8	0
3	0.8	0
4	0.9	0
5	1.1	1
6	1.2	1.5
7	1.2	4.2
8	1.3	0
9	1.2	0
10	1.2	0
11	3.1	3.2
12	1.2	0.4
13	1.1	0.4
14	0	0
15	1.1	0
16	1.1	0
17	0.7	0
18	1.1	0
19	1.2	0
20	1.1	0
21	0	0
22	4.8	4.9
23	6.7	6.8
24	0	0
25	5.6	5.6
26	6.7	6.7
27	1.3	1.3
28	0.5	0.5
29	0	0
30	0	0
31	0	0
32	6.7	6.7
33	0	3.9
34	0	2.1
35	0.4	0
36	0	0
37	1.8	1.8
38	0	0
39	4	0
40	6.6	6.7
41	0.6	2.9
42	0.5	3
43	0.4	2.9
44	2.3	2.3
45	1.5	0
46	0.4	0.9
47	1.8	1.8
48	1.5	0
49	0.8	0
50	2.3	2.3
51	1.5	1.5
52	1	0.9
53	2.9	2.9
54	0.5	0
55	1.5	1.5
56	1.1	1
57	0	0
58	1	0
59	0	0
60	0	0
61	6.7	6.7
62	4.7	4.7
63	0	0
64	2.2	2.3
65	0	0
66	6.7	6.7
67	3.6	3.5
68	0	0
69	0	0
70	0	0
71	0	0
72	0.4	0
73	1.8	0
74	0.8	0
75	6.7	6.7
76	2.6	2.6
77	0	0
78	6.7	6.8
79	6.6	-
80	0	0
Q6103		
1	1.8	1.8
2	1.8	1.8
3	4.9	4.8
4	6.8	6.7
5	1.8	0
6	1.8	1.8
Q6104		
1	1	1
2	1	0
3	5.6	0
4	6.8	6.7
5	0	1
6	0	1
Q6105		
1	4.9	0
2	4.9	0
3	6.6	0
4	6.7	6.7
5	4.9	4.9
6	4.9	5
Q6106		
1	0	0
2	0	0
3	2.6	2.6
4	6.7	6.7
5	0	0
6	0	0
Q6107		
1	4.8	4.8
2	4.8	4.8
3	1.8	0
4	6.7	6.7
5	4.8	4.8
6	4.8	4.8
Q6108		
1	4.9	0
2	4.9	3
3	6.7	4
4	6.8	6.7
5	5	3
6	4.9	3
Q6110		
1	1.8	0
2	0	1.8
3	4.7	0
4	6.7	6.7
5	1.8	1.8
6	0	1.8
Q6109		
G	0	1.8
D	3	0
S	0	0
Q6112		
1	3.1	0
2	3.1	3.1
3	0	0
4	6.7	6.7
5	3.1	3.1
6	3.1	3.1
Q6113		
G	1.6	1.5
D	3.1	3.1
S	0	0

<MDA>

MODE PIN NO.	REC	PLAY
IC1601		
1	0	0
2	0.9	0
3	0.9	0.9
4	0	0
5	0.9	0.9
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	5	5
15	0	0
16	0.4	0
17	0	0
18	0.5	0
19	0	0
20	0.5	0
21	0	0
22	0	0
23	0	0
24	6.7	6.7
25	1.5	1.5
26	0	-
27	1.5	1.5
28	1.5	1.5
29	0	0
30	1.5	0
31	0	1.5
32	1.5	0
33	1.5	1.5
34	1.5	1.5
35	3	3
36	3	3
37	0	0
38	0.7	0.7
39	0.7	0
40	1.2	1.2
41	0	0
42	0	0.4
43	3	0
44	0	0
45	0	0
46	0	0
47	3	0
48	0	3
49	0	0
50	0	0
51	0	0
52	0	0
53	0	0
54	0.4	0
55	0.7	0
56	0.7	0.7
57	0	1
58	0.6	0.6
59	0	0
60	1	1.1
61	2.7	2.7
62	1.2	0
63	1.5	0
64	0	1.5
65	1.5	1.5
66	0	0
67	1.5	1.5
68	0	0.5
69	0	0
70	0.9	0.9
71	0.8	0.9
72	0.9	0.8
73	0.9	0
74	1.2	1.1
75	0.4	0.4
76	0	0
77	6.9	6.9
78	0	1.8
79	1.8	0
80	0	0
Q1601		
1	0	0
2	0	0
3	0	4.9
4	0	0
5	0	4.9

<W/B>

MODE PIN NO.	REC	PLAY
IC1101		
1	0	2.4
2	2.4	2.4
3	2.4	0
4	0	0
5	2.4	0
6	2.4	2.3
7	1.5	0
8	4.8	4.8
Q1151		
E	0	0
C	4.3	4.3
B	-	-

<IR/TALLY/EJECT>

MODE PIN NO.	REC	PLAY
IC1801		
1	4.5	4.8
2	4	0
3	0	0
4	0	0
Q1801		
E	0	0
C	0	0
B	0	0

<JACK>

MODE PIN NO.	REC	PLAY
IC3751		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-

<PHY>

MODE PIN NO.	REC	PLAY
IC3101		
1	0.6	0
2	0	0
3	0	0
4	2.9	2.9
5	0.4	2.9
6	2.9	2.9
7	0.4	1.3
8	0	0
9	1.2	1.3
10	0	0
11	0.4	1.3
12	0.4	1.3
13	0.4	1.3
14	0.5	1.4
15	0.5	1.4
16	0.4	1.4
17	0	0
18	0	0
19	0.4	0.4
20	0.4	0.4
21	0	0
22	0.4	0.4
23	0	0
24	0	0.4
25	0	0
26	0	0
27	0	0
28	0	0
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0
35	0.6	0
36	0.6	0
37	0	0
38	0	0
39	0.7	0
40	0.7	0
41	0	0
42	0	0
43	0	0
44	1.8	0
45	1.9	0
46	1.9	0
47	1.8	0
48	1.9	0
49	0	0
50	0	0
51	2.9	0.4
52	0	0
53	0	0
54	3	0
55	3	0
56	1.4	0
57	1.5	0
58	3	0
59	0	0
60	0.6	0
61	0	0
62	0.6	0
63	0	0
64	0	0

<MONITOR>

MODE PIN NO.	REC	PLAY
IC7201		
1	1	1
2	6.7	6.7
3	6.7	6.7
4	0	0
5	0	1.2
IC7210		
1	2.9	2.9
2	1.3	1.8
3	2.9	2.9
4	0	0
5	0	0
6	0	0
7	0	0
8	3	2.9
IC7300		
1	0	0
2	3	2.9
3	-	-
4	3	2.9
5	3	3
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	3	2.8
15	2.9	2.9
16	1.8	1.7
17	0.7	0.7
18	0	0
19	3	2.9
20	3	2.9
21	1.4	1.4
22	1.5	1.5
23	0	0
24	0	0
25	0	2.9
26	0	0
27	0	0
28	0	0
29	0	0
30	5.4	5.4
31	1.2	0
32	0	0
33	1.3	1.2
34	0	0
35	1.3	0.9
36	0	0
37	11.8	0
38	1.1	-
39	0	0
40	0	0
41	11.8	11.8
42	0	0
43	0	0
44	0	0
45	0	0
46	0	0
47	0	0
48	0	0
49	0	0
50	0	0
51	0	0
52	0	0
53	0	0
54	0	0
55	3	2.9
56	0	0
57	0	0
58	0	0
59	0	0
60	0	0
61	0	0
62	0	0
63	3	2.9
64	0	0
65	0	0
66	0	0
67	0	0
68	0	0
69	-	-
70	0	0
71	0	0
72	0	0
IC7400		
1	0	0
2	2.3	2.4
3	1.7	1.7
4	0.4	0.4
5	0.4	0.4
6	2.9	2.9
7	1.3	1.3
8	1.1	1.1
9	0	0
10	0	0
11	0	0
12	0	0
13	2.9	2.8
14	2.9	2.9
15	2.9	2.9
16	2	1.8
17	0.7	0.7
18	0	0
19	3	2.9
20	3	0
21	1.4	0
22	1.5	1.4
23	0	0
24	1.6	1.6
25	2.9	2.9
26	0	0
27	0	0
28	0	-
29	0	0
30	5.8	5.9
31	-	1.7
32	0	5.9
33	0	1.7
34	0	5.9
35	0	1.7
36	0	5.9
37	11.8	11.8
38	1	2.2
39	0	0
40	0	0
41	11.8	11.8
42	0	5.8
43	0	0
44	1.5	1.4
45	3	3
46	0	0
47	0	0
48	0	0
49	1.3	1.3
50	3	2.9
51	1.3	1.3
52	1.3	1.3
53	0	0
54	0	0
55	3	2.9
56	0	0
57	0	0
58	0	0
59	0	0
60	0	0
61	1.5	1.5
62	1.5	1.5
63	3	2.9
64	0	0
65	3	2.9
66	3	3
67	0	0
68	1.5	1.5
69	1.2	0
70	0	2.1
71	0	0
72	0	0
Q7201		
E	0	6.7
C	0	6.7
B	0	6
Q7202		
E	0	0
C	6.7	6.7
B	-0.5	0
Q7203		
E	0	0
C	0	0
B	3	3
Q7300		
E	11.8	11.8
C	0	0
B	11.8	11.8
Q7301		
E	0	0
C	0	0
B	0	2.9
Q7302		
E	0	1.2
C	0	0
B	0	0
Q7305		
E	0	0
C	0	11.8
B	0	5.4
Q7306		
E	0	6
C	0	0
B	0	0
Q7307		
E	0	0
C	0	11.8
B	0.7	0.6
Q7308		
E	0	5.4
C	0	0
B	0	4.9
Q7400		
E	0	0
B	0	0
C	11.8	11.8
Q7401		
E	0	0
C	0	11.8
B	0	0
Q7402		
E	0	1.2
C	0	0
B	0	0.6

<CCD/AD>

MODE PIN NO.	REC	PLAY
IC4101		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
IC4102		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
IC4201		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-

MODE PIN NO.	REC	PLAY
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-
39	-	-
40	-	-
41	-	-
42	-	-
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	-	-
IC4202		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
IC5001		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-

MODE PIN NO.	REC	PLAY
35	-	-
36	-	-
37	-	-
38	-	-
39	-	-
40	-	-
41	-	-
42	-	-
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	-	-
49	-	-
50	-	-
51	-	-
52	-	-
53	-	-
54	-	-
55	-	-
56	-	-
57	-	-
58	-	-
59	-	-
60	-	-
61	-	-
62	-	-
63	-	-
64	-	-
Q5201		
E	-	-
C	-	-
B	-	-

<PRE/REC>

MODE PIN NO.	REC	PLAY
IC3501		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-

MODE PIN NO.	REC	PLAY
39	-	-
40	-	-
41	-	-
42	-	-
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	-	-
49	-	-
50	-	-
51	-	-
52	-	-
53	-	-
54	-	-
55	-	-
56	-	-
57	-	-
58	-	-
59	-	-
60	-	-
61	-	-
62	-	-
63	-	-
64	-	-
Q3501		
E	-	-
C	-	-
B	-	-
Q3502		
E	-	-
C	-	-
B	-	-
Q3503		
E	-	-
C	-	-
B	-	-
Q3504		
E	-	-
C	-	-
B	-	-

<MPL>

MODE PIN NO.	REC	PLAY
IC5401		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-

<MONITOR BL>

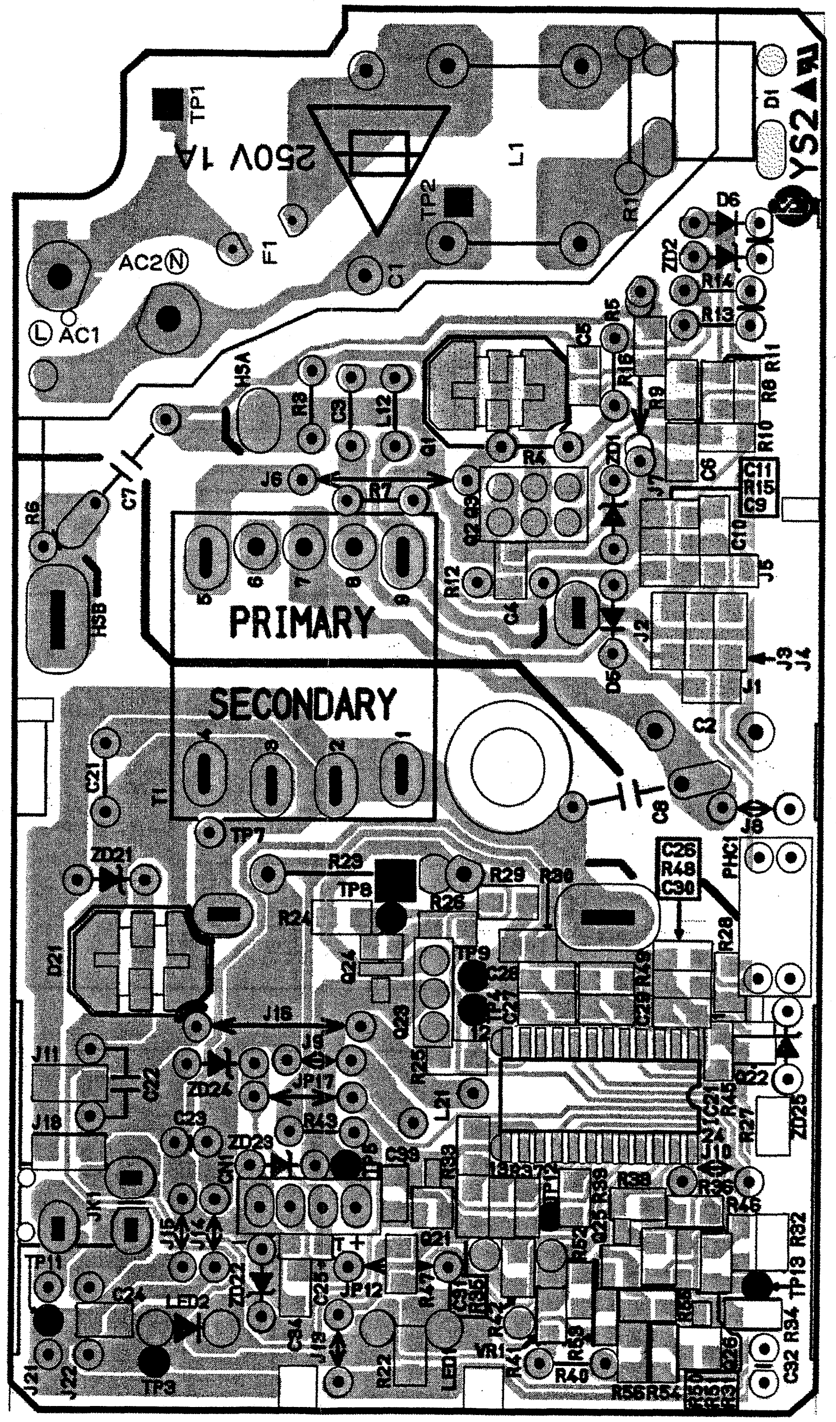
MODE PIN NO.	EE
IC6701	
1	6.7
2	0
3	3
4	1.3
5	5.1
IC7501	
1	1
2	1
3	0
4	0
5	0
6	0.9
7	1.4
8	0
9	6.7
10	2.1
11	0
12	1.9
13	1.2
14	1.2
15	0
16	0
IC7502	
1	0
2	2.1
3	0
4	0
5	2.9
Q6701	
E	0
C	0
B	3
Q6702	
E	0
C	0
B	0
Q7501	
1	0
2	2.9
3	0
4	0
5	0
6	0
Q7502	
G	0.8
D	6.6
S	0
Q7504	
1	1.9
2	1.9
3	1.3
4	0
5	1.4
6	0.8

<DIAL>

MODE PIN NO.	EE
Q6701	
E	0
C	0
B	3
Q6702	
E	0
C	0
B	0

SECTION 5
AC POWER ADAPTER

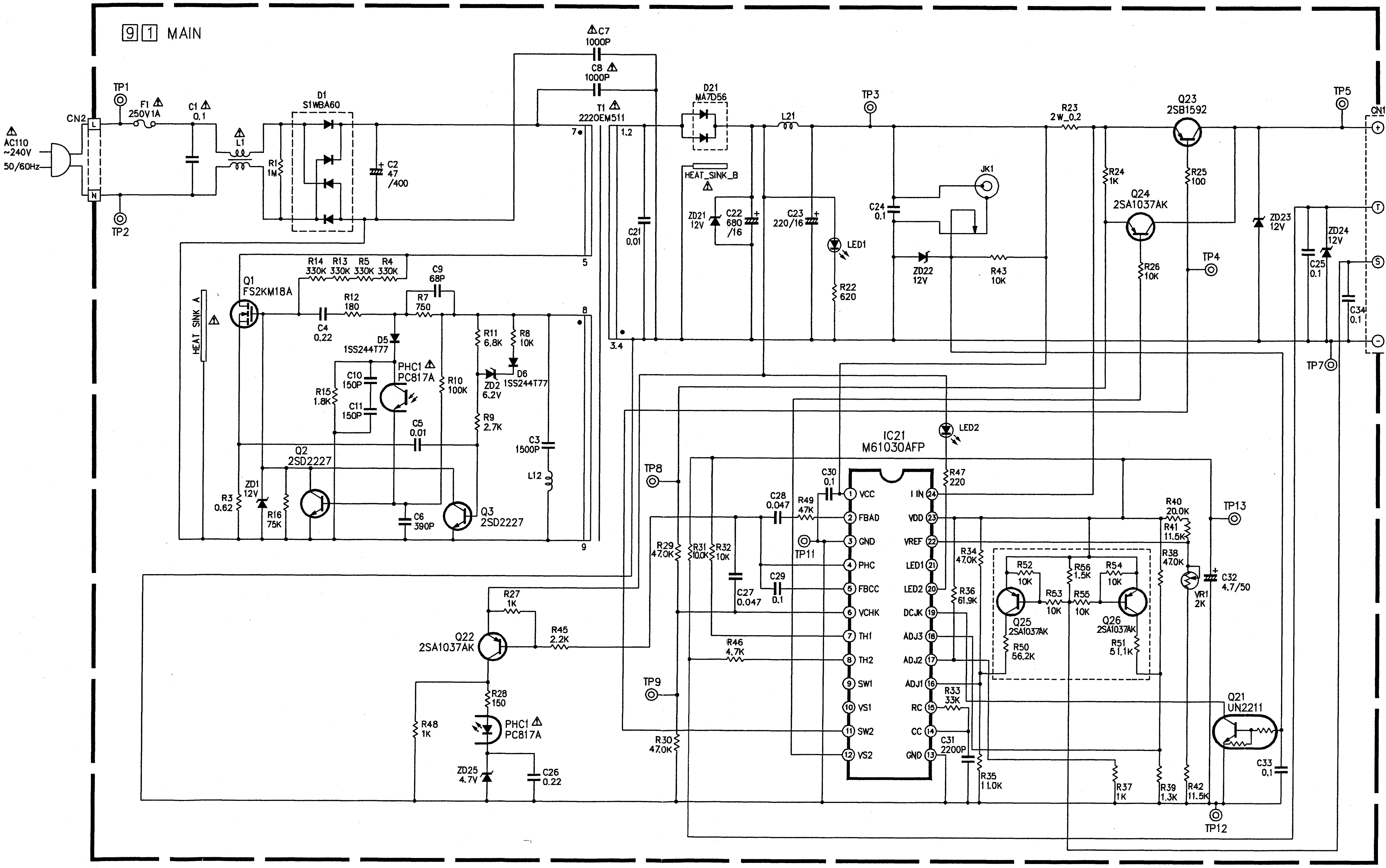
5.1 CIRCUIT BOARD



5.2 SCHEMATIC DIAGRAM

NOTE: *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*

Safety precautions
The components identified by the symbol ! are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.



9 1 MAIN
AC110 ~240V 50/60Hz
CN2
L
N
TP1
TP2
F1 250V1A
C1 0.1
L1
R1 1M
D1 S1WBA60
C2 47 /400
C7 1000P
C8 1000P
T1 2220EM511
7
1,2
5
8
9
3,4
C21 0.01
D21 MA7D56
HEAT_SINK_B
ZD21 12V
C22 680 /16
C23 220/16
L21
TP3
LED1
R22 620
C24 0.1
JK1
ZD22 12V
R43 10K
R23 2W 0.2
Q23 2SB1592
R24 1K
R25 100
Q24 2SA1037AK
R26 10K
TP4
ZD23 12V
ZD24 12V
C25 0.1
C34 0.1
TP5
TP7
CN1
+
T
S
−
HEAT_SINK_A
Q1 FS2KM18A
R14 330K
R13 330K
R5 330K
R4 330K
C9 68P
R12 180
R7 750
C4 0.22
D5 1SS244T77
R11 6.8K
R8 10K
D6 1SS244T77
ZD2 6.2V
R10 100K
PHC1 PC817A
C10 150P
C11 150P
R15 1.8K
C5 0.01
R9 2.7K
C3 1500P
L12
Q2 2SD2227
ZD1 12V
R3 0.62
R16 75K
C6 390P
Q3 2SD2227
LED2
IC21 M61030AFP
TP8
C30 0.1
C28 0.047
R49 47K
R47 220
1 VCC
2 FBAD
3 GND
4 PHC
5 FBCC
6 VCHK
7 TH1
8 TH2
9 SW1
10 VS1
11 SW2
12 VS2
24 I IN
23 VDD
22 VREF
21 LED1
20 LED2
19 DCJK
18 ADJ3
17 ADJ2
16 ADJ1
15 RC
14 CC
13 GND
TP11
R29 47.0K
R31 10.0K
R32 10K
C27 0.047
C29 0.1
R46 4.7K
TP9
R30 47.0K
R34 47.0K
R36 61.9K
R33 33K
C31 2200P
R35 11.0K
R52 10K
R56 1.5K
R54 10K
R53 10K
R55 10K
Q25 2SA1037AK
Q26 2SA1037AK
R50 56.2K
R51 51.1K
R40 20.0K
R41 11.5K
R38 47.0K
TP13
C32 4.7/50
VR1 2K
Q21 UN2211
C33 0.1
R37 1K
R39 1.3K
R42 11.5K
TP12
R27 1K
Q22 2SA1037AK
R45 2.2K
R28 150
R48 1K
PHC1 PC817A
ZD25 4.7V
C26 0.22